

iPad & iPhone

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Why the iPad Air 2
is better
than the
Nexus 9



Welcome...

Welcome to this issue of *iPad & iPhone User*, the only guide you need to the wonderful world of Apple iDevices.

Let's kick off with the big news: the new iPads are here! And this is a good thing.

In its 2014 Q3 earnings call Apple announced a record quarter. We heard about 39.2 million iPhones sold, and \$42.1 billion revenue. Given that the most optimistic analysts were forecasting 40 million iPhone sales in a quarter that had only 10 days of the new iPhones on sale, that is pretty special stuff. (Consider also that the new iPhones weren't yet available in China when those figures were generated.)

One of the great things about Apple's mobile- and tablet products is just how easy they are to use. You don't need an instruction manual for an iPhone or an iPad. This can mean that you miss out on some of the more high-end, in-depth features and functions of your smartphone or tablet. In this and all issues of *iPad & iPhone User* we aim to help with that. Turn to page 48 for 55 pages of tips, tricks and tutorials, all aimed at helping you get more from your Apple device. And do let me know at matt_egan@idg.co.uk if there is anything else you'd like to know. We're here to help.

But as ever we kick off with the latest iPad and iPhone reviews. See how the latest Apple kit compares to the best of the rest. And enjoy this issue of *iPad & iPhone User*.



Google Nexus 9 vs iPad Air 2

We reveal how Google's tablet compares to the Air 2

First things first: the iPad Air 2 is more expensive than is the Nexus 9. So if you are looking to save a few pennies you may find that a good reason to choose Android over iOS. The 16GB Wi-Fi-only iPad Air 2 costs £399, the 64GB option is £479

and the 128GB model £559. The Nexus 9 starts at £319 for the 16GB Wi-Fi only model, while the 32GB version will set you back £399.

Add cellular connectivity to the Nexus 9 and you'll pay £459 for the 32GB version (although this isn't yet available). The LTE iPad Air 2's 16GB Wi-Fi and cellular price is £499. That scales up to £579 for 64GB, and £659 for 128GB. There is no direct comparison here, so if you want those specifications then you need to stick with the iPad.

Software

I'm going to dive straight into the Android vs iOS debate, because in this case I think it may be a deal breaker. The Nexus 9 runs Android 5.0 Lollipop, the iPad Air 2 iOS 8.

Here's the thing: Android on smartphone is now great and - as I have written elsewhere on this site - every bit as good as is iOS for iPhone. But in the tablet world it is a little different, because of the lack of productivity apps optimised for tablet in the Android world. On iPad, of course, you can install Microsoft Office. For free. The Nexus 9 and Android is ideal for anyone thinking about buying a tablet for use on the commute home to keep you entertained. You'll be able to achieve some productivity tasks on your Nexus 9, of course, but you'll be limited to mobile apps. (I should point out that Office for Android is on the way – and there are other such apps available.)



If you are a long-term iPad user you are probably best off sticking with what you know. You have after all spent a lot of cash on apps that you'll have to spend again in Android. But it is only fair to point out that your iTunes music files will work in Android, and Android offers the opportunity of shopping around for music, movies, books and TV shows.

Hardware and performance

In the words of Salt-N-Pepa: let's talk about specs, baby. The Nexus 9 is tricked out with an nVidia Tegra K1 processor. This is a 2.3GHz 64-bit dual-core Denver chip, paired with 2GB of RAM. Rest assured, it is a fast and responsive tablet. We've not yet had a chance to run our full benchmark tests on the Nexus 9 to determine exactly how powerful it is, but it certainly feels that way from our hands-one testing.

But the iPad Air 2 is different. We may well get an Intel-toting iPad Pro early next year, but in the iPad Air 2 Apple has already created the most powerful ARM tablet we have seen. The A8X processor and M8 coprocessor, clocked at 1.5GHz, is a triple-core 64-bit processor. Paired with 2GB RAM the iPad Air 2 has turned in some truly stunning benchmarking performances. It is the fastest tablet we have tested thus far, with average GeekBench 3 scores of 1818 (single core),



4520 (multi-core). If the Nexus 9 can beat this it will be going some. Reader, it won't. Both these tablets are speed demons, and any difference is probably unlikely to affect your day-to-day experience. But the iPad Air 2 is a genuinely amazing performer.

Design and build

The HTC-designed Nexus 9 looks sleek and sophisticated, with a brushed metal frame and featuring a soft grip plastic back. It is available in any colour you like, as long as you like black, white or Google's new 'sand' colour. The iPad Air 2 is a beautiful device, staggeringly thin, if a little heavier than the Nexus.

They measure up thus: the Nexus 9 is 7.95mm thick, and is 425g, the iPad Air 2 weighs 437g and is just 6.1mm thick. You really can notice the difference in thickness, but not in weight. However, you may wish to put the iPad in a case which negates this advantage for the iPad. And leaving subjectivity aside we will say that design and build would be no reason to choose the iPad over the Nexus.



Display

Google's Nexus 9 has an 8.9in screen. The aspect ratio of the Nexus 9 is 4:3 like the iPad, and the resolution of the IPS display on the Nexus 9 is



2048x1536. This gives it a very healthy pixel density of 281ppi. The iPad Air 2 has a bigger, 9.7in display. Because of that bigger display its 2048x1536-pixel resolution means a pixel density of 'only' 264ppi. Again, it's hard to pick a winner on this aspect of these two tablets. So let's make it simple: if you want a marginally bigger display go for the iPad Air 2. Should you desire marginally greater sharpness: the Nexus is for you.

Storage and connectivity

The Nexus 9 offers 16- or 32GB of internal storage. The iPad Air 2 comes in 16-, 64-, and 128GB flavours. The bad news is that neither of these devices offers expandable storage. That is a blow because 16GB is really not enough for a well-used media-consumption tablet. As I mentioned earlier, if you want a good amount of storage you need to get the iPad Air 2, but you will pay for the privilege.

The Nexus 9 comes with NFC, as well as optional 4G LTE, 802.11ac Wi-Fi and Bluetooth 4.1. The iPad Air 2 offers the same, without the NFC. The Nexus 9 connects and charges via a generic USB cable, while the iPad Air 2 uses an Apple Lightning connector.

Cameras

Do we care about tablet cameras? If so the Nexus 9 both have two cameras, and none of the four is

likely to replace your SLR. The Nexus 9's rear-facing camera is an 8Mp sensor with an f/2.4 aperture, accompanied by an LED flash. Video recording capabilities are 1080p, and there's a 1.6Mp camera on the front. The iPad Air 2 also has two cameras. And 8Mp rear-facing snapper with geo-tagging, touch focus, face/smile detection and HDR. Around the front is a 1.2Mp camera. There's not enough difference here for you to make a purchasing decision based on the cameras.

iPad & iPhone User's buying advice

The Nexus 9 is an excellent Android tablet. If you are a first-time buyer looking for a media-consumption tablet, and 32GB is enough storage, you will not be disappointed. And at the bottom end of the spec you can save money. But for performance, productivity and storage options the iPad Air 2 is unsurpassed.





iPad Air 2 vs mini 3

We help you decide which tablet is right for you

The iPad Air 2 is Apple's flagship tablet, if you will. It has a 9.7in screen, the latest A8X processor and is the thinnest iPad to date.

The mini 3, reviewed, has a 7.9in screen but the only real difference to its predecessor (the iPad mini 2, or iPad mini with Retina display to use its original name) is the Touch ID sensor, also a new feature on the iPad Air 2. If you head to Apple's website, you'll see the biggest range of iPads it has ever offered for sale, since you can still buy the previous generation along with the original iPad mini (which lacked a Retina screen).

Price

Apple kept last year's prices for the Air 2 and mini 3, while dropping the prices for last year's models. The

cheapest Air 2 costs £399 and has 16GB of storage (and no GPS receiver, just like all Wi-Fi only iPads).

The mini 3 costs £319 for 16GB and just Wi-Fi as opposed to the cellular model which lets you get on the internet on the move. That's £100 more, the same premium commanded by the cellular iPad Air 2. You've also got the option of 64GB or 128GB of storage with both new iPads, and that's an extra £80 and £160 respectively, regardless of whether it's the cellular or Wi-Fi model.

Obviously the iPad mini 3 is the cheaper option at every level, but it's not the best value.

Hardware

So, why is the iPad Air 2 better value? It's because the new A8X processor is so quick. It outperforms the iPad mini 3's A7 CPU by a big margin, as you can see in our full iPad Air 2 and iPad mini 3 reviews.

Not everyone will need the Air 2's huge performance, but even then the iPad mini 3 isn't the obvious choice. The reason for that is because you can still buy the iPad mini 2, which has the same processor, yet is £80 cheaper.



As you already know, the Air 2 has a 9.7in screen and the mini 3 has a smaller 7.9in display. Both have the same resolution, which is unchanged from their predecessors at 2048x1536. Both are excellent screens, and the iPad Air 2 now has a laminated display which makes the tablet feel more solid and sturdy than the original iPad Air, and also improves image quality slightly. (It also has a new anti-glare coating that helps to cut down on reflections a little.)

The Air 2 also has 802.11ac Wi-Fi which should provide faster file transfers when connected to a compatible router or hotspot. The iPad mini sticks with the 802.11n dual-band setup of its predecessor (and the iPad Air).

Finally, the Air 2 has a barometer for detecting changes in air pressure. This isn't for weather warnings, though: it's for detecting altitude so compatible apps can tell you how many flights of stairs you climbed, while carrying your iPad. (Bear in mind that iPads don't have the new Health app found on iPhones with iOS 8.)

Cameras

Cameras, not typically your first priority when choosing a tablet, have nevertheless been updated on the iPad Air, with the rear sensor getting upgraded from 5- to 8Mp. The difference in quality isn't as great as you might imagine, but with the help of the new image



signal processor, the iPad Air 2 can now shoot slo-mo video and photos in burst mode: features previously only on the iPhone 5s, 6 and 6 Plus.

Meanwhile, the iPad mini 3 has a 5Mp camera, capable of time-lapse and panoramas in addition to the usual photo and video modes. Both iPads have the same FaceTime HD camera with a 1.2Mp sensor.

iPad & iPhone User's buying advice

If you must have a Touch ID sensor on your iPad, then the iPad Air 2 is 'the best'. It's the fastest, supports the latest Wi-Fi standard, supports faster LTE, has a higher-resolution rear camera which also gets new features: slo-mo and burst modes.

However, it's more expensive, and the base 16GB model doesn't provide enough storage for most people. That means it's the 64GB version at £479 or £579 – depending on whether you want the cellular version or not – which is the real price here.

You could argue that the iPad mini 3 is aimed at less-demanding users for whom 16GB might be enough. Otherwise, it's again the 64GB version at £399 or £499 (Wi-Fi or cellular) which you'll need to buy.

But as we've already said, the iPad mini 3 isn't necessarily a good buy. If you don't need Touch ID, then go for the iPad mini 2 which is £80 cheaper and is available in a still-useful 32GB model for only £279 or £379 for Wi-Fi and cellular models respectively.

If you were considering the iPad Air 2, then bear in mind that the original iPad Air is still a fantastic tablet, and could be better value at £319 for the 16GB Wi-Fi version, or £359 for 32GB.



iPhone 6 vs Sony Xperia Z3 Compact

We look at how these top-selling phones compare

Cards on the table: here at *iPad & iPhone User*, we love our iPhones, and the recent launch of the brilliant iPhone 6 and iPhone 6 Plus has reconfirmed our commitment to the iOS world. But we like to keep our fingers on the pulse of the Android world, and compare the best iPhones with the best of the rest. We like to make sure we aren't missing anything. In this article we have reviewed the excellent Sony Xperia Z3 Compact, comparing

it to the iPhone 6. Both are 5in handsets, both are powerful, and both boast a great feature set. But is there anything about the Xperia Z3 Compact that is sufficiently great to make us ditch our iPhones? Honestly, no.

But that doesn't mean that there aren't areas in which the Xperia Z3 Compact matches or betters the iPhone. It just means that it isn't so much better as to make us take a leap into the unknown. The Xperia Z3 Compact really is an excellent handset, as you will find out.

Price and availability

The iPhone 6 starts at £539 inc VAT for the 16GB model. You will likely need more space than that, and the 64GB will set you back £619, £699 gets you

a 128GB iPhone 6. The iPhone 6 is widely available throughout the UK. Meanwhile the Xperia Z3 Compact comes in only a 16GB flavour, and is available to buy from Sony at £429 inc VAT.

However, shop around and you can get it for a much more attractive price of £349. Even at that £429, the Sony is cheaper than the iPhone 6.



Specs, benchmarks

The iPhone 6 comes with an Apple A8 processor – a dual-core chip



running at 1.4GHz. And it has only 1GB RAM. It is a super fast handset, and the iPhone's benchmark scores are excellent.

Inside the Xperia Z3 Compact is a Qualcomm Snapdragon 801 quad-core processor clocked at 2.5GHz. It has 2GB RAM. Both phones are rapid and powerful, but how do they compare in terms of benchmarks? Very well. The Xperia Z3 Compact has an excellent multi-core Geekbench 3 average of 2800 points, showing that in general use it is a fast and responsive phone. This compares to the iPhone 6's score of 2794 points. Within the margin for error, these are basically the same score.

Moving on to the GFXBench T-Rex test to find out how good are these handsets at handling graphics, and the Xperia Z3 Compact achieves 41fps compared to the iPhone 6's 49fps. This is a decent win for the iPhone. On the more stringent Manhattan test the Sony scores 26fps and the iPhone 6 26fps. Overall then we can say that the iPhone 6 is a marginally better smartphone than is the Xperia Z3 Compact when it comes to handling graphics. To be entirely fair we should point out that this is unlikely to affect you unless you like to play intensive games.

Finally we ran the Sunspider JavaScript test which measures JavaScript performance and is a good indicator of responsiveness in handling web pages and general zippiness. Here a lower score is better,

and the Xperia Z3 Compact turned in an impressive score of 944ms (anything under 1000ms is snappy). The iPhone 6 blows even this away, however, with a staggering score of 351ms. Overall then we can say that both of these phones are measurably fast, and good at handling even the most complex graphics. But the iPhone 6 is a little better.

In terms of other specs the iPhone 6 offers 802.11ac Wi-Fi and Bluetooth 4.0, and is an LTE 4G phone. The same is true of the Xperia Z3 Compact, which also adds NFC. The iPhone 6 has NFC of course, but only for Apple Pay (not yet available in the UK). If you have a use for NFC, that's a win for the Sony, I suppose.

Battery life

Meanwhile the iPhone 6 has a non-removable Li-Po 1810mAh battery and the Xperia Z3 Compact a bigger, but also non-removable 2600mAh cell.

In our tests we've found the Xperia Z3 Compact's battery life to be simply immense, lasting comfortably for two to three days between charges.



If left alone, the device will only drop a few percent each day. By contrast the iPhone 6 is good, but not as good. So if battery life is a killer consideration, opt for Android in this case.

Storage

As we mentioned above the iPhone comes with onboard storage of either 16GB, 64GB or 128GB. These are great options, although we can't imagine anyone being satisfied with 16GB these days. And, of course, the Xperia Z3 Compact comes in only a 16GB flavour.

But before you accuse us of bias, the situation is more nuanced. For one thing the 64GB and 128GB versions of the iPhone 6 are much more expensive than is the Xperia Z3 Compact. For another: the Sony has a storage expansion slot that allows you to add up to another 128GB of storage.

A quick search online shows that you can get a 128GB SD card for between £50 and £100. There are potential performance issues with using expandable storage, of course, and if you want the best phone experience you should get a high-capacity iPhone. But if you are counting the pennies the Xperia Z3 Compact really does offer superior value.

Display

The iPhone 6 sports a 4.7in display. It is an LED-backlit IPS LCD, capacitive touchscreen with 16M colours. You get,



as you would expect, shatter proof glass with an oleophobic coating. Into this display is packed 750x1334 pixels, making for a pixel density of 326ppi. This is very much an iPhone screen: sharp and colourful, with realistic colour reproduction and good viewing angles.

The Xperia Z3 Compacts screen is a smaller 4.6in. The resolution remains at 720p so we see a minor drop in pixel density to 319ppi. But even with our Apple fan heads on we can say that this isn't really a big deal. The Sony screen is crisp, bright. The display is also responsive and has optional glove and double tap to wake options. The 'smart backlight control' will keep the screen on as long as you're looking at it. We can't honestly say that either display is better.

Design and build

Indeed, the most important thing about the Xperia Z3 Compact's screen is the amount of real estate on offer for the diddy size of the phone. Or to put it another way, the display is almost as big as the iPhone 6's, but our Apple phone is a much larger device. At 138.1x67x6.9mm the iPhone 6 is certainly not a small phone, but it is uncommonly thin. And 129 g is very light for a large-screen smartphone: much as you would expect from Apple. The iPhone





6 is a very different device from the iPhones of the past four years. The new phones have rounded edges – not just the metal, but the edges of the glass front are curved. This and the overall thinness make it a very comfortable fit in the hand.

The Xperia Z3 Compact is thicker, but lighter than its rival at 8.6mm and 127g.

Waterproof design is becoming synonymous with Sony and the Z3 Compact has a high rating of IP68 meaning it's fully dust proof and can be plunged into water up to 1.5m deep continuously. This does mean slightly annoying flaps – although not for the headphone port – but that's the price you pay. You can barely notice them when in place.

Once again, build quality feels top-notch with Sony's combination of glass and aluminium. The Xperia Z3 Compact feels desirable in the hand. A new feature to the design are nylon corner pieces (where it's more likely to land) to avoid damaging the metal if you drop the phone.

Overall we'd say the iPhone 6 is the more beautiful handset, but the Xperia Z3 Compact is more robust. And it is waterproof. You pays your money you takes your choice, but if you are the sort

of person who regularly dunks their handset in the sea, a move to Sony may be on the cards.

Cameras

The iPhone 6 sports an 8Mp rear-facing main camera that can capture video up to 1080p at 60fps, and 720p at 240fps. The Z3 Compact has a 20.7Mp rear camera with Exmor RS sensor. It includes a new 25mm wide-angle lens and a super high ISO of 12800 for improved shooting in low light. By default, it takes photos at 8Mp but in manual mode you can switch up to 15.5Mp (16:9) and 20.7Mp (4:3) if you like. The Compact can now shoot video in 4K and there's an improved Steady Shot with Intelligent Active Mode for keeping content smoother. It's a great phone camera. We'd say it is better than the iPhone 6's, although not necessarily so much better that anyone other than the confirmed shutterbug will care. It is a consideration, though.

Around the front both devices have webcams, the iPhone's being a 1.2Mp camera and the Sony's a 2.2Mp. If the quality of phone camera is critical, you may find yourself casting admiring glances outside the iPhone world.



Software

Android vs iOS is a conundrum. Android isn't like it used to be: if you are new to the smartphone game there's no obvious winner. These are the two most popular and best mobile operating systems around so it's about picking which one is right for you.

In essence, if you are a long-term iOS user you are probably best off sticking with what you know. You have after all almost certainly spent a lot of cash on apps that you'll have to spend again in Android. But it is worth considering that your iTunes music files will work in Android, and Android offers the opportunity of shopping around for music, movies, books and TV shows.

iPad & iPhone User's buying advice

We're *iPad & iPhone User*, and we love iPhones. But even we accept that in the smartphone world Apple's rivals are catching up. The Xperia Z3 Compact is a stunning mid-sized, mid-priced handset. Indeed, that price is the major thing that catches our eye. Given that you can get more accessible storage than that of the £699 128GB iPhone 6 by shelling out around £500 for an Xperia Z3 Compact and an SD card, it is a better deal. Performance only slightly lags the iPhone 6's, and we even prefer the Sony's camera. And although it doesn't look as good as does the iPhone, it is more lifeproof. So if you want to keep costs down, and are prepared to switch from iOS to Android, you could do a lot worse than the Xperia Z3 Compact. But if you are prepared to pay for the ultimate smartphone experience, we will be sticking with our iPhones.



iPhone 6 Plus

In-depth look at Apple's super-sized smartphone

The iPhone 6 Plus is a gargantuan 5.5 inches diagonally across its screen. It's by a huge distance the biggest iPhone so far, but will the advantages of so much screen space outweigh the negatives: loss of portability, greater power requirements, and difficulty for one-handed use?

Size

Before the unveiling of the iPhone 6 series handsets, Apple was pretty conservative on size. The original iPhone along with the 3G, 3GS, 4 and 4s all had 3.5in screens; the iPhone 5, 5c and 5s had 4in screens. We're not used to dramatic change in this area.

But now the screen size has seen a dramatic (and double) jump: up to 4.7in on the iPhone 6, and on the iPhone 6 Plus a stunning increase all the way to 5.5in. This is exciting stuff for the many Apple followers who had been crying out for bigger screens. But Apple had its reasons for keeping things to 4 inches or below for so long. It came down to how comfortable the phones were to use, with Apple designing the iPhone 5 so you could reach all areas of the device while holding it in one hand.

However, in its insistence on being right about size not mattering (or rather, bigger not always being better), Apple ceded the large end of the market to Samsung and co, and customer pressure began to build. Why wouldn't Apple release an iPhone with

a bigger screen? Eventually, Apple relented and introduced bigger iPhones. But the original reasons for staying small haven't gone away.

The 5.5in iPhone 6 Plus is Apple's entry into the phablet market, something we're sure Steve Jobs would have pooh-poohed this time last year had he still been alive. But phablets are hot: some say they're a major reason why tablet sales have slowed down.

Will the new bigger iPhones help Apple to reach a part of the market that wasn't interested in 4in iPhones? Or are they likely to damage Apple because they could be seen as alienating those who would prefer a smaller phone?

Having held the iPhone 6 Plus we have to say that it wouldn't be the phone of choice for all members of the *iPad & iPhone User* team. Some of us have small hands, and the iPhone 6 Plus dwarfed them. We could hardly grip the phone with one hand, let alone use it one handed.

But even those of us with relatively big hands find it a little bit uncomfortable to use: not egregiously so, just slightly awkward. We prefer holding the iPhone 6; we sort of miss the 5s. And while at first we thought the 6 Plus's form would grow on us, even now, after a month or more of regular use, we're still finding it an awkward shape and size.

For pocketability, the 6 Plus is of course less convenient than its smaller siblings. It does still slip into a trouser pocket (helped by its wonderfully thin body) but you're far more aware of it. The iPhone 6 Plus feels like more of a handbag/briefcase device than a true pocket handset.

Of course, for some people the iPhone 6 Plus will be the perfect size; our US colleague Jason Snell, for instance, thinks the size feels entirely natural, as he discusses later in this article. Everyone is different.

Design and differences

There's not a big difference between the two new iPhones, other than the size (the Plus is 14 percent wider than the iPhone 6) and some more advanced camera technology inside the 6 Plus, the two phones share many specs and a similar design that sets them aside from last year's iPhone 5s and 5c.

Despite being the biggest and second-biggest iPhones of all time in terms of height, width and screen size, the iPhone 6 and 6 Plus are both more slender (flatter) than the phones that preceded them. The design is more curvy, with rounded edges rather than the straight sides of the iPhone 5s.

Oddly enough, the iPhone 6 Plus brings to mind the original iPhone just a little bit, what with its curved aluminium edges and all-metal back. A more recent touchstone for many users will be the iPhone 3GS, the most recent 'rounded' iPhone design.

Even the glass screen has a slight curve at the edges, which feels



pleasant against your hand in a way that the sharp edges of the iPhone 4 and 5 series (iPhone 5c excluded) never quite did.

It strikes us that Apple needed to slim down the iPhone 6 Plus as much as possible. Had the edge been 7.6mm rather than 7.1mm, that would have been a lot of extra bulk to cart around, not only adding to the weight, but meaning it would sit less comfortably in your hand: you would have to stretch your palm half a centimetre further in order to reach the screen. This definitely matters if you have small hands.

There are other hardware design changes that set the new iPhones apart from the iPhone 5s. For example, the volume buttons are no longer round, but oval. And the sleep/wake button is no longer at the top of the iPhone where it has always been – instead, it's on the right-hand side. This is presumably to make it easier to reach one handed.

As with all iPhones, build quality is excellent. Buttons and switches are uniformly firm and



responsive, and the Ring/Silent switch produced a satisfying click. One small concern is the rear-facing camera, which (presumably as a casualty of the ever-shrinking depth of the iPhone's chassis) sticks out a little bit and marginally spoils the integrity of the iPhone 6 Plus's profile. Laying the iPhone 6 Plus down on its back on a hard, flat surface (all the surfaces in the press test area were soft mats, funnily enough) causes it to lie unevenly.

The colour options are the same for the iPhone 6, 6 Plus and the iPhone 5s: black (Space Grey), white (silver) and gold. Only the iPhone 5c offers a selection of bold colour options.

Build quality and 'Bendgate'

Following reports that claim an iPhone bent when it was kept in an owner's pockets for some time, and a video in which an iPhone 6 Plus was bent by force, a number of people expressed concerns about the new iPhone 6 Plus handset.

Reports are suggesting that the build quality of the new handset isn't up to scratch. Is this the case?

Apple has released a statement claiming that it rigorously tested its new iPhones, and that only nine people reported a bent iPhone 6 Plus to them during the first six days of sale (Apple sold 10 million iPhone 6-series models in the first three days).

Apple emphasised in its statement that: "iPhone 6 and iPhone 6 Plus feature a precision engineered unibody enclosure constructed from machining a custom grade of 6000 series anodized aluminium, which is tempered for extra strength. They also feature stainless steel and titanium inserts to

reinforce high stress locations and use the strongest glass in the smartphone industry. We chose these high-quality materials and construction very carefully for their strength and durability. We also perform rigorous tests throughout the entire development cycle including 3-point bending, pressure point cycling, sit, torsion, and user studies. iPhone 6 and iPhone 6 Plus meet or exceed all of our high quality standards to endure everyday, real life use.”

Apple also gave a tour of the laboratory where its iPhones are tested. Apple says it runs three different ‘sit-down tests’ that replicate what might happen if the phone was sat on. The devices are also put through a bend test with 25kg of pressure exerted. The devices are also twisted.

Apple’s not the only one to have performed stress tests on the iPhones. Consumer Reports performed its own “bendability” tests which involved a “three-point flexural test”, in which the phone is supported at two points on either end, then force is applied at a third point on the top,” and found that the devices were “pretty tough”.

Consumer Reports didn’t just test the iPhone 6 and 6 Plus, they also tested the iPhone 5, LG G3, Samsung Galaxy Note 3, and HTC One (M8).

The M8 turned out to be the least sturdy, followed by the iPhone 6, and then the 6 Plus.

The HTC One (M8) deformed at 31kg of pressure and separated from the case at 40.8kg

iPhone 6 took 31.75kg before coming apart at 45.36kg

iPhone 6 Plus deformed at 40.8kg of applied force and came apart at 49.9kg

LG 3G deformed at 58.9kg and separated from the case with the same pressure: 58.9kg

iPhone 5, was tougher than the 6-series, deforming at 58.9kg and coming loose from the case at 68kg) Samsung Galaxy Note 3 was the toughest coming loose at 68kg but deforming at 58.9kg of force like the iPhone 5.

Even before Consumer Reports ran its tests, Square Trade had reported that the new iPhones performed impressively in their Breakability tests. However, that company has since said it will carry out further tests on the new handset.



“The new series of iPhones performed above expectations, scoring higher than both previous iPhone models and popular Android phones like the Samsung Galaxy S5. The iPhone 6’s Breakability Score of 4 sets a new high mark with a slightly better performance than even Google/Motorola’s Moto X and the HTC One. The much larger iPhone 6 Plus scored a 5, more than a full point better than the Samsung Galaxy S5, making it the most durable phone with a screen larger than five inches,” according to Square Trade.

According to Square Trade: “The iPhone 6 Plus is not only more durable than

most large screen phones, but it also outscored last generation's iPhone 5s; Both new iPhones performed very well in most tests, but the iPhone 6 Plus lost some points because some users may have a hard time gripping the phone due to its large but slim form; The screens on both new iPhones held up very well to Breakability testing, giving credence to Apple's promise of ion-strengthened glass." Square Trade offers a protection plan for mobile devices.

It should be noted that this kind of force would have the potential to break any phone. In fact, it's not really surprising that a 7.1mm-thick device made from aluminium would bend. This is exactly what the laws of physics would predict.

However, there have been criticisms that it's Apple's use of aluminium that is to blame, since this is a comparatively malleable metal. (Other smartphones include a magnesium alloy chassis on the inside for extra strength.)

Others suggest that rather than the use of aluminium being to blame, it's the design. One Reddit user noted that the bend is happening where the volume control buttons are located, because that is the weakest point: Apple drilled holes into the aluminium case to accommodate the volume buttons. In our own evaluations we felt the iPhone 6 Plus was sufficiently sturdy. However,



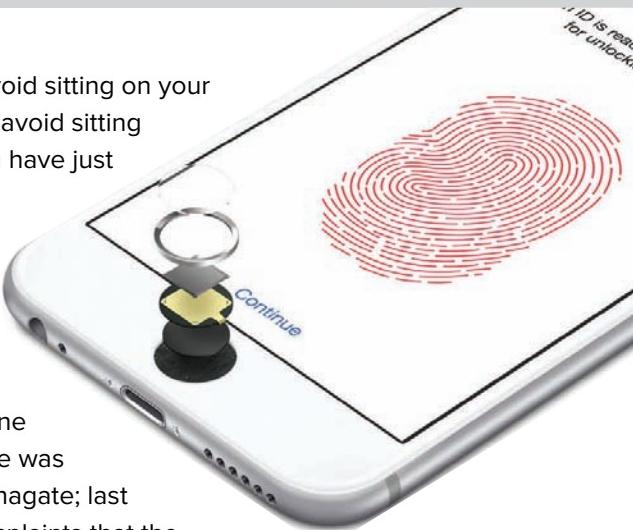
just as you would avoid sitting on your glasses, you should avoid sitting on a device that you have just spent a fortune on.

Of course, this isn't the first '-gate' scandal associated to afflict an iPhone launch.

Back when the iPhone 4 launched everyone was talking about Antennagate; last year there were complaints that the 5c was too highly priced, and that the 5s was apparently hackable.

Apple products are not perfect, by any means – no mass-produced item can be. But you hear more about these particular issues because Apple makes good headlines, and also because a lot of people run out and buy Apple products at launch. Other phones suffer from similar issues but we hear about them less because the only people who really care are the owners of those devices.

One last theory that is perhaps worth mentioning: a Reddit user has compared an iPhone 6 Plus bought the day after launch, and one bought six weeks after launch, and claims they are physically different. It seems unlikely that Apple would have been able to redesign the iPhone 6 Plus, making it somehow sturdier without changing the exterior dimensions, test it, ship it and get it out to customers, all within the space of six weeks, but some Apple fans are hoping it's true.



Can you use it one-handed?

Well, as you might expect, it largely depends on the size of your hand. As we said above, some of the *iPad & iPhone User* team have particularly small hands and the iPhone 6 Plus doesn't suit those people. However, in his review on Macworld.com, Jason Snell says that "after a few days, I found I had unconsciously changed the default position of my fingers when holding the phone, and using it felt entirely natural". He also added: "In my average-size male hands, I found I could hold the iPhone 6 Plus, and manage to get my thumb to reach across the screen, at the very bottom, if I concentrated."

Luckily, Apple has added a feature in iOS 8 that make it easier to reach the controls for the iPhone.



Apple calls it Reachability and it is a pretty good word for what it does (we look at that in more detail below). However, as much as you may hope that you can use the iPhone 6 Plus one handed, you are likely to be disappointed. It really is a device destined for two-handed operation so it'll be tricky to use when standing on a crowded train.

For some people that won't be a concern. Not everyone commutes and therefore not everyone needs to use their smartphone with one hand. The great news is that Apple has at least made it easier to use the new iPhone 6 Plus one handed where necessary. That's attention to detail that no other manufacturer would offer, in our opinion.

As for pockets, will the iPhone 6 Plus fit in yours? One of our colleagues had no trouble putting the iPhone 6 Plus in their jeans pocket. Snell also says that the Plus fitted in his pocket. Small hands seem to go with small pockets and unsurprisingly we were unable to get the iPhone 6 Plus to fit in our pocket though. If you carry a bag with you that won't be a problem, but if not you may find the plus sized iPhone 6 a bit tricky to conceal about your person. That said, we've not heard any phablet users complaining that they couldn't fit it in their pocket.

The message here is try the iPhone 6 Plus in your hand before you buy it because no two hands are the same and that means that only you can decide if you are comfortable with this gigantic phone.

Reachability

Conscious that some smartphone buyers (and, to be brutally honest, the company itself, when

commenting on Android phones in the past) have said that 5.5in screens are too large to use one-handed, Apple has equipped the iPhone 6 Plus (and, in fact the iPhone 6 too, even though its not quite so vast) with a new feature to enable precisely that. It's called Reachability.

This is Apple's solution for not being able to reach the far corners of the screen when you are using the iPhone 6 Plus one handed. (These features apply to the iPhone 6, too).

You activate Reachability by tapping the home button twice (just a tap, not a push). When activated Reachability slides the top of the screen down to where your thumb can reach it. The idea is that, when you're holding the device in one hand, you can't reach the whole screen; so if Mohammad can't



get to the mountain, the mountain must come to Mohammad. Ingeniously, Reachability brings the entire screen down to within finger-tapping reach. Another double-tap returns everything to normal.

Reachability isn't a particularly elegant solution to the issue, but it is a solution and it does make the larger screen more usable. In our testing there was some inconsistency in how Reachability was implemented. We expect this to be ironed out in future operating system updates.

However, we love the idea, and the humility of acknowledging that such an approach might be needed. (Compare with the Steve Jobsian 'You're holding it wrong' approach when the iPhone 4's antenna issues emerged.) Our US colleague Dan Moren isn't totally convinced by Reachability, however.

"This 'fix' is weird and somewhat un-Apple," he observes. "I found myself wondering if a better solution might emerge farther down the road. But I suspect that this feature will appeal to the same folks who frequently use the multitasking gestures that have been built into the iPad for a long time. It's the iPhone's equivalent of a keyboard shortcut: something for those power users who just don't want to be slowed down."

iPhone 6 Plus versus iPad mini

Some people are suggesting that the iPhone 6 Plus is really an iPad nano. It certainly sits somewhere between the iPad mini and iPhone 6 in terms of size.

If you already own an iPad – particularly a mini – you may be wondering what the iPhone 6 Plus

could bring you that you don't already get from your iPad. Perhaps the iPhone 6 Plus makes more sense for those of us who don't own an iPad, or for those who think a tablet is a tad too big for what they have in mind. There's also the benefit that the 6 Plus has many features you won't see on the iPad, yet.

Specs

Here are iPhone 6 Plus's specs, we'll look at each in more detail below.

Processor: As expected, an A8 chip with 64-bit architecture, and a M8 co-processor. Said to offer approximately 25 percent higher speed – on paper – than the iPhone 5s's A7 chip, and 50 percent greater graphics performance. Obviously we would insert the usual caveat about current apps being quite comfortably handled by the A7 so that any actual performance improvements won't become noticeable until more demanding apps are written for the A8. More of a future-proofing component than a short-term benefit.

Screen: 5.5in 'Retina HD' screen with a resolution of 1920x1080 and a pixel density of 401ppi; 1300:1 contrast ratio (typical)

Rear-facing iSight camera: 8Mp photos; f/2.2; optical image stabilisation; 1080p video recording

Front-facing FaceTime camera: 1.2Mp photos; f/2.2; 720p video recording; burst mode

Storage: 16GB, 64GB and 128GB

Ports: Lightning connector

Dimensions: 158.1 x 77.8 x 7.1mm

Weight: 172g

Screen

We've already mentioned that the display in the iPhone 6 Plus is huge: 5.5 inches from corner to corner. What is it like to actually look at?

Apple is referring to the display on both the iPhone 6 and iPhone 6 Plus as 'Retina HD'. This may be pushing the truth somewhat with the iPhone 6, which has exactly the same pixels per inch (326) as the iPhone 5, 5c and 5s - they aren't packed in any closer together.

The iPhone 6 Plus, on the other hand, offers 401ppi. That's the highest pixel density seen on an Apple iOS device, and the same resolution as a full 1080p display, which is what your HD TV offers.

Mind you, when Apple first introduced Retina display as a concept it said that the eye was unable to see any more pixels, so maybe it doesn't really make a difference. Except it does, as we know from looking at Android phones with more pixels. We weren't convinced that upping the screen resolution beyond standard Retina was worth the expense, since many experts had claimed that human eyes can't discern greater detail than that at standard smartphone distance. But our initial impressions were, well, pretty great. Every app we looked at was stunning on the 401ppi screen.

Apple says it offers wider viewing angles because of its dual-domain pixels. We certainly felt the most impressive aspect of the screen was the wide viewing



angle and the extra clarity when compared to the iPhone 5s. When placed flat on the desk and viewed from the side we could see the colours and clearly make out the app icons. We also felt that the screen was a lot less reflective than the screen on the 5s, although being bigger meant that there was a lot more screen for reflections.

In order to make the most of the more detailed screen Apple is using scaling techniques so that more detail can fit on the screen, including extra keys on the keyboard.

Apple has also added a feature called Display Zoom so you could choose to view the screen like you would on a smaller iPhone, only zoomed in.

Camera

Another particularly noticeable change is to the camera – not just new photography features but the fact that the lens protrudes out in a way that some are suggesting is very un-Apple. So un-Apple in fact that the company seems to have gone to great lengths to ensure that the unsightly bump doesn't show up in its promotional photography. The lens is surrounded by a thin metal ring. Apparently this



was a trade-off made necessary by the fact that the iPhone is too thin for the camera mechanics. It may be preferable than the whole iPhone being a few millimetres thicker. If this is the reason though it does seem strange that both iPhones have the same protrusion. Surely the slightly thicker iPhone 6 Plus could have concealed more of the bulge.

As we mentioned above, there are some new camera features offered by the iPhone 6 Plus and the iPhone 6, and some new features that can only be found on the 6 Plus. Only the 6 Plus offers Optical image stabilization while the iPhone 6 only offers digital image stabilization. The lens on the 6 Plus can actually move up and down, and side to side in order to adjust and stabilize images. Apple claims that this works well in low-light.

Both iPhones offer Focus Pixels for faster autofocus, this is useful when shooting video as these pixels automatically focus continuously as you are shooting. In his review Snell noted that: “The focus behaviour in video is the feature I noticed the most - video focus has never been really been one of the iPhone’s strong suits. But the focus in the test videos I shot with the iPhone 6 and iPhone 6 Plus were clear and smooth, never seeming robotic or jarring.”

According to Apple, you no longer need to tap the screen to tell it to focus, either.

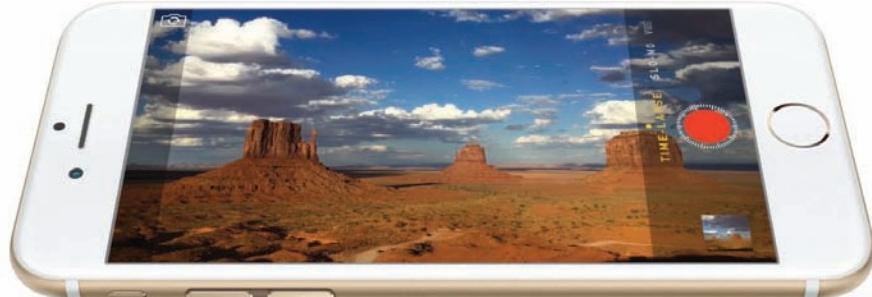
We tested this feature out and found it to be true. Filming a figure and placing something in and out of the frame caused the camera to change its focus between whatever happened to be in the foreground and the figure. It happened quickly.

Running the same comparison on the iPhone 5s we found that the only way to get the camera to focus was to tap on the screen where we wanted the point of focus to be. It is an impressive feature. We intend to try it in low light as this is where Apple says it has the greatest effect.

There is also improved face detection on both the front and back facing cameras; Panorama shooting at up to 43Mp; and 1080p HD video recording at 30- or 60fps (previously only 30 fps); Cinematic video stabilisation; and continuous autofocus video.

Cinematic video stabilisation coupled with Slo-mo video - which you can now record at super-detailed 240fps as well as 120fps – allows for smooth action running at one eighth the speed of normal video.

The front-facing FaceTime camera has also had some improvements. It now features a new sensor with a larger f/2.2 aperture that lets in 81 percent more light – perfect for low-light selfies and video calls. This compares to the f/2.4 aperture on iPhone 5s). There is also Auto HDR for photos and videos on FaceTime camera (previously that was only photos); and a Burst mode on the FaceTime camera. We haven't had a chance to fully test this camera yet.



Despite these new features for the camera, there will be disappointment for some. There is no improvement in terms of megapixels. The new iPhones still offer 8Mp cameras. Many rival smart phones offer many more megapixels.

A8 processor

The new iPhone 6 and iPhone 6 Plus are powered by the new Apple A8 processor, although it's running at different clock speeds. The iPhone 6 Plus runs at 1.39GHz compared to the iPhone 6 at 1.2GHz.

This A8 processor is the successor to last year's A7 chip, which was a giant leap by its own account offering a huge speed improvement thanks to its 64-bit capabilities. We're not going to see as big a leap with the A8 chip – but we're not sure that we really need to as unless you are playing high-powered games it's unlikely to make much of a difference to you. One way in which the new chip might make a difference is in power efficiency. The A8 uses a different manufacturing process that makes it more power efficient, and that may have an impact on battery life. However, the A8 is definitely faster than last year's A7, according to our tests. We ran the GeekBench Single- and Multi-Core tests on the new iPhones. The results were as follows:

Single-core

iPhone 6 Plus: 1626

iPhone 6: 1517

iPhone 5s: 1409



Multi-core

iPhone 6 Plus: 2917

iPhone 6: 2586

iPhone 5s: 2549

M8 coprocessor

The Motion coprocessor also gets an update. The M8 replaces the M7 from the iPhone 5s. This chip is used to collect sensor data – it is a clever way to save battery life as it bypasses the A8 (or A7) processor. The M8 also collects data from the new barometer sensor which is used to measure elevation changes so it can tell if you have been climbing steps and gauge your fitness levels from that.



Speed and graphics performance

While discussing the new A8 processor we said that performance gains from the iPhone 5s are unlikely to be noticeable for the foreseeable future, and sure enough our brief hands-on time with the iPhone 6 Plus didn't stun us with speed improvements. It's consummately slick and zippy in use, of course, but so was the 5s; high-powered games couldn't stretch its powers, but again, neither were they an issue for the previous generation of iPhone. We ran the GFX Bench graphics benchmarking on the new iPhone 6 Plus and the iPhone 5s.

We've been advised that the onscreen results are not currently representative of the native resolution of the new iPhone (developers are currently working on a GFXBench update to fix this), so we've only got off-screen results for now. The results were as follows:

Manhattan 1080p off-screen

iPhone 6 Plus: 1152 (18.6 fps)

iPhone 5s: 768 (12.7 fps)

T-Rex 1080p off-screen

iPhone 6 Plus: 2252 (40.2 fps)

iPhone 5s: 1474 (26.3.7 fps)

Apple showcased a new game called Vainglory and as you would expect, the new iPhones handled its graphical fireworks with ease.

RAM

Both phones appear to have the same 1GB RAM as the iPhone has since the iPhone 5 launched. Many iPhone rivals offer more RAM. While some suggest that it's unnecessary to add more RAM as Apple's iOS software manages memory sufficiently well. That's not necessarily our experience and we must admit to being disappointed that Apple hasn't added more RAM. Hopefully iOS 8 will manage memory better than iOS 7 did.

Battery life

Battery life has improved somewhat, made possible both by the fact that the bigger case can fit a

bigger battery. Apple claims that the iPhone 6 Plus battery life is up to 24 hours of talk time on 3G; up to 16 days/384 hours of standby; up to 12 hours of internet use on 3G, up to 12 hours on LTE, and up to 11 hours on Wi-Fi; up to 14 hours of video playback; and up to 80 hours of audio playback. That sounds pretty impressive.

By contrast, Apple claims that iPhone 6 battery life is up to 14 hours of talk time on 3G; up to 10 hours of internet use on 3G, up to 10 hours on LTE, and up to 11 hours on Wi-Fi; up to 11 hours of video playback; and up to 50 hours of audio playback.

The iPhone 5s and iPhone 5c had identical battery life, according to Apple, which claimed, for those handsets: up to 10 hours of talk time on 3G; up to 8 hours of internet use on 3G, up to 10 hours on LTE, and up to 10 hours on Wi-Fi; up to 10 hours of video playback and up to 40 hours of audio playback.

We haven't yet been able to test the battery fully to verify Apple's claims. However in his testing for Macworld, Jason Snell suggested that the iPhone 6 Plus and iPhone 6 both appeared to have better battery life than the iPhone 5s. Of course, comparing a battery in a year old device with a completely new battery isn't an entirely fair test. We will update this section of this iPhone 6 Plus review as soon as we have been able to properly test battery life.

iFixIt has already torn down the iPhone 6 Plus and reports that the battery is listed at 2915mAh at 3.82 volts: which means the 6 Plus has double the battery capacity of the 5s, which had a 1560mAh battery. It is also larger than the iPhone 6's 1810mAh battery.

iFixIt also concluded that the new iPhones will be easier to repair than previous models and the battery easier to replace (although not considered user replaceable).

NFC & Apple Pay

The iPhone 6 Plus and iPhone 6 both support Near Field Communications, the standard that lends itself to Apple Pay, Apple's new mobile payment service. This won't mean much to anyone in the UK yet as we don't know when Apple Pay will come to the UK. It launched in the US in October.



Apple Pay is really exciting to us as a concept: it's a mobile payment system that will allow you to pay for stuff using your iPhone's Touch ID fingerprint scanner. Very convenient, rather cool, and in principle more secure than current credit-card systems, although we'll be watching closely to see how the security side of things works out.

Apple Pay is based on the NFC wireless protocol so requires an NFC antenna – which the iPhone 6 Plus and iPhone 6, but no other iPhones, have. So it's restricted to the latest generation of iPhone (and, in more limited implementations, the Apple Watch, iPad Air 2 and iPad mini 3).

Software

As we mentioned earlier, the extra screen real-estate can be used to add features to apps, like additional keyboard keys. The most noticeable change is that when you rotate the iPhone 6 Plus home screen the icons switch to landscape mode, as per the iPad. There's a slight difference compared to the iPad, though: the dock stays in the same place, on the right of the screen.

Apple has also updated various apps to take advantage of the bigger screen, including Mail and Notes. There is a wide-screen view for landscape mode for example. Both apps can use a two-column view with a list of items on the left and a preview or area for editing on the right. This is similar to the way things work on the iPad.

Much as if you were using Calendar, Mail or a similar app on an iPad, the iPhone 6 Plus lets you view many default apps in landscape mode with two columns. And the Home screen itself can flip to a landscape mode - an omission which we always found a little odd. (The dock doesn't flip to the



bottom of the screen, though. It sits rather nattily on the side of the screen.)

The iPhone 6 Plus comes with Apple's iOS 8 software preinstalled; take a look at our iOS 8 review to see how that appeals. Obviously you can supplement the default features of this operating system by buying and downloading additional apps, which Apple says now number more than 1.3 million. (You'll also be able to update to iOS 9 for free when it launches next year. This will add some new features to the iPhone 6 Plus's arsenal.)

Price

Here are the full range of pricing options: 16GB, £619; 64GB, £699; 128GB, £789.

Each of these phones costs £80-£90 more than the same-capacity iPhone 6. It's a lot to ask for a smartphone, even one as beautiful as the iPhone 6 Plus, and likely to put off all but the most committed (or large-handed) of Apple fans.

Apple has removed the mid-ranking 32GB model, which gives the average buyer a big nudge up towards the 64GB. We're not sure we could manage with 16GB, although those who store most of their media in the cloud and rarely download large apps might well be fine. We wouldn't recommend the 16GB, though. It will be more like 12GB in reality, and that will fill fast with apps, videos, photos and music. Try for the 64GB if possible. Of course you may not need to pay the up-front price that Apple asks. Many of the UK networks will offer the iPhone 6 Plus for less than Apple's price, you will just make up the difference in the monthly contract price.



Faster charging

Charge your iPhone faster by following this advice

Charging an iPhone – or an iPad – seems like a straightforward process, but it can be slow. However, many Apple fans don't realise that the speed of charging varies depending on the way you charge the device: there are simple tricks you can use to charge your iPhone faster. Armed with a bit of knowledge you can dramatically reduce the time it takes to charge up an iPhone's battery.

In this feature we look at how to charge up your iPhone (or iPad) quickly and safely, and some of the best ways to make iPhone charging a faster and more efficient process.

Pick the right charger

Tip number one: the tech specs of your charger or charging adaptor can make a big difference to

charging speed. Not all iPhone chargers are born equal, and some charge much faster than others. The iPhone chargers use a USB to Lightning cable, which is attached to a USB charging point (adaptor). There are three different types of adaptor available:

- USB socket on a computer
- iPhone adaptor
- iPad adaptor

These chargers have different specs:

Computer USB: 5 volts, 0.5 amps, 2.5 watts of power

iPhone charger: 5 volts, 1 amp, 5 watts of power

iPad Air charger: 5.1 volts, 2.1 amps, 10 watts of power (nominal)

This can seem confusing at first, but the figure that's relevant from a charging-speed point of view is wattage: this is a function of time, and defines the speed of energy transfer. The higher the wattage, the faster the charger can fill up your device's battery. (We say 'can', because other factors may limit the charging speed, and in fact the "charger" is not the adaptor, as that is to be found inside the phone, and it's that which regulates the charge coming from the adaptor. Buying a 50-watt charger from a third-party accessory maker wouldn't necessarily result in proportionally faster charging times – or be a good idea for other reasons.)

So the charger you pick has a dramatic effect on the amount of time it takes to charge up an iPhone.

Pretty obviously, you should always charge up an iPhone using the iPhone or iPad adaptor, rather than the USB socket on a computer: this is slower.

(Of course there may be other reasons why you would choose to charge via your Mac - having your iPhone connected to your Mac allows for very easy file transfers, for instance, and only uses up one plug. But if speed of charging is your priority, you should plug your iPhone or iPad into the mains.)

Bear in mind that the adaptors above are the official Apple units; third-party charging products are likely to vary in their specs. If using a non-Apple adaptor you should check the wattage and see what it delivers compared to an Apple charger. It's possible that the two will offer significantly different charging speeds.

Remove the case

A lot of people swear by this simple tip for more efficient charging: take the case off your iPhone. But we're not convinced that it will produce appreciable benefits, at least on the speed front.

The problem you're avoiding here is heat buildup: you'll have noticed that iOS devices can heat up when charging (particularly when charging and running an app at the same time - so don't do that), and a case can make this problem worse.

Excess heat can cause issues with the battery capacity - but the main effect of heat is to cause the battery to wear out faster.

So taking off the case may not produce appreciable improvements in charging speed - but it could mean the battery last longer. So if you've

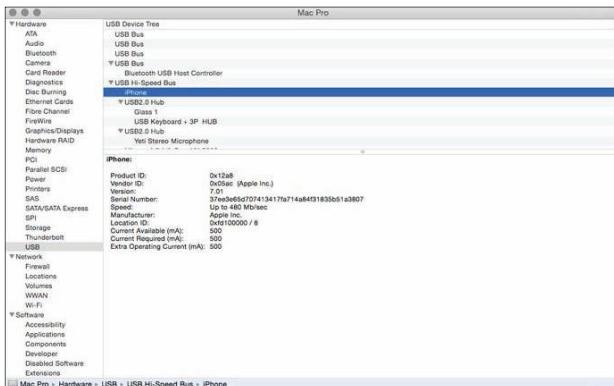
ever noticed your iPhone or iPad heating up during a charge (we've noticed this more with iPads than with iPhones, but both can be affected), play it safe and take the case off when charging in future.

Charge when connected to a Mac

Let's say that for various reasons already mentioned you do wish to charge your iPhone via a Mac's USB port. Are there any ways to make that faster?

There have been several rumours that Mac computers contain a high-power USB port. This isn't strictly true, but different Apple computers do have different specifications for their ports. This may affect charging speed: variations in current (measured in amps or milliamps) in turn change the all-important wattage. Power, as our patient technical editor has explained to us, is produced by multiplying voltage by current.

They can also affect whether the ports are able to power your devices at all. This explains why you may have plugged your iPad into a Mac and seen the error message 'Not charging', or simply found that



the device didn't charge. A Mac with USB 2.0 ports (typically a MacBook) is rated at 500mA at 5V, while a Mac with USB 3.0 ports offers 900mA at 5V. But beyond this, a Mac with USB 3.0 can provide up to 1100mA at 5V under certain conditions (as described in this Apple support document).

Apple makes it very clear how you should go about charging an iPhone or iPad via a Mac:

- An Apple peripheral device must be plugged directly into an Apple computer or display
- Your Apple computer or display must be powered on and must be awake
- The port providing extra power is determined by the first Apple peripheral or device to connect to the Apple computer

Use Airplane Mode

One neat trick is that you can charge an iPhone slightly faster by switching on Airplane Mode. This is because it turns off 3G and Wi-Fi and uses less power while charging. Open Control Centre and tap the plane-shaped icon when charging.

Turn the iPhone off

In a similar way, switching your iPhone off during charging enables it to charge faster. Again, the difference will be fractional, but may be worth it.

This is because the iPhone isn't draining any power at all during charging. Plug the iPhone into the wall charger, hold down the Sleep/Wake button and use the Slide To Power Off icon to switch off the iPhone. Leave it for a couple of hours to fully charge.



Delete photos in iOS 8

How to remove photos from an iPhone or iPad

To delete a photo, find it in your Photos app and then tap 'Select' in the top right corner. Now, tap the bin icon in the bottom-right corner and tap Delete photo.

You can select multiple photos at once and then tap the bin icon to delete all of the photos selected.

If you've created your own folder of photographs and want to delete the whole thing, go to the Albums view and then tap 'Edit' in the top right corner. You can now tap the red circle that appears on the left to delete the album. You won't be able to do this with the default folders created by Apple.

In iOS 8, however, when you delete photographs by following the instructions above, they don't actually delete from your iPhone or iPad immediately. Instead, it moves the photos to the 'Recently Deleted' folder where it will remain for 30 days unless you go to the folder and delete it from there. This is handy when you accidentally delete a photograph, but if there's a photo you really want to remove from your iPhone or iPad you'll need to remember to delete it from here too.

All you need to do is tap 'Select' and then tap 'Delete All' or select individual photos.

Delete photos from iCloud

If you use Photo Stream, which is an iCloud-based feature, you'll also want to go into your Photo Stream Album in the Photos app on your iPad or iPhone and then select the photographs you want to delete in the same way as described above. This will delete those photographs from all of the devices you use for Photo Stream.

iCloud Photo Library is still in beta so not all of its features are active yet, but you can turn it on if you're using an iPhone or iPad in order to store your photos and videos in the cloud, access them on all of your connected devices and save space on your devices. If you use iCloud Photo Library, you can delete photographs by going to any of your connected devices and deleting it in the same way as described previously in this article. This will delete the photograph from your iCloud Photo Library so they will no longer be available on your iPhone, iPad, iPod touch or web browser through iCloud.com.



Remove unwanted apps

Free up space by deleting old and unused apps

We've all got apps that we'd like to get rid of; whenever we get a new smartphone or tablet, the temptation is always to head straight to the App Store and download everything in sight, like a kid in a digital candy shop. However, more often than not this leaves us with piles of apps that we're bored with after five minutes and that can often be difficult to shift from your accounts. So, if you're having trouble ditching that stubborn Flappy Bird clone, here's our guide on how to delete unnecessary apps for good.

Removing apps from your Apple device is simple: just long-press on the app's icon until it starts jiggling around, and a little cross appears at the corner. Tap the cross, confirm the deletion, and the app goes

bye-bye. Press the home button to restore your app icons to normal, non-jiggly functionality.

If you sync your device to a Mac or PC on a regular basis, you'll also have to remove these apps from your iTunes library in order to prevent the deleted apps redownloading whenever you sync.

In order to do this, open iTunes on your Mac or PC and go to the apps section of your library. Find the app you deleted from your device, right-click it, and select delete.

iTunes will, however, still remember that you've purchased them, and list them in the 'Purchased' section of your account. Removing them permanently is less than easy – in fact, it's currently impossible. If you're worried about friends or family uncovering embarrassing app downloads, the best solution is the relatively low-tech option of simply signing out of your iTunes account before handing over your device.





Get an iPhone to work with your car stereo

Play music from your iPhone in your car

Earlier this year Apple launched CarPlay, an integrated display system that will be provided as an optional extra when you buy a new car, various car manufacturers have been integrating this system in their new cars, but we don't all have new cars do we. What if your old banger doesn't work with your iPhone?

Imagine this: You have all your music loaded up on your iPhone for a road trip, you jump in your car and then realise you don't have any means of

playing it through your car stereo. What can you do if you don't have a car radio with USB or AUX port? We have the answer.

What to do if you don't have a car radio with USB or AUX port

It's hard not to find a modern car radio that doesn't come with the features you've come to expect, namely, a USB port to connect physically to your iPhone, or, even better for some, a bluetooth connection so you can do the same wirelessly (although this removes the added advantage of being able to charge your phone at the same time, and bluetooth does drain your battery noticeably).

That's all well and good, but what do you do if you don't have a fancy new stereo in your old venerable car? Are you stuck listening to the radio, CDs, or heaven forbid, cassettes, on your long journeys? Thankfully, no. Some enterprising developers have a handful of easy options for you to connect your high end gadget onto an old car radio and listen to your favourite songs from iTunes without breaking much of a sweat.

Cassette adaptors for iPhones

Let's start with the oldest of the bunch. Some of us undoubtedly still use radios equipped with cassettes players. Even though cassettes are no longer manufactured, the hardware is still around, so what can we do with them? Well, it turns out that an ingenious device designed to convert the sound coming from a stereo mini-jack to a modified cassette has been in existence for years. I personally



remember using one of those to hook up my portable CD player to a car radio in order to listen to those tracks over 15 years ago.

Amazingly, you can still purchase them from numerous different companies. A quick look through Amazon for 'cassette adaptor' will reveal page after page of similar devices ranging in price from £1.99 to upwards of £20. I would imagine a mid-range model would probably be ideal. The way it works is as simple as can be: slot the cassette into the tape deck, connect the mini-jack to your iPhone, choose your song, press play on both the iPhone and your car stereo, and out comes the music. The quality won't be pristine of course, but it's much better than the alternative, which would be listening through your tiny iPhone speaker – hardly an immersive experience.

Charging your iPhone in your car

Don't forget though that playing music will drain your battery so getting yourself a 12V charger for your iPhone would be a useful addition to your car. Again, you'll find a long list of available options

through Amazon, but consider choosing one that can handle enough power to charge up an iPad. Even if you don't yet own a tablet, more power means your iPhone will charge up faster. Also, should you ever get yourself an iPad, you won't need another charger for it – you'll be able to swap between the two devices.

Using your iPhone with your CD player

If your car stereo is more recent and therefore has replaced the tape deck for a CD-player, the above solution will be useless to you, and you can't put a fake CD connected to a stereo cable in your CD-player: since discs spin, the results would be potentially messy. Which explains why such products don't actually exist!

iPhone FM transmitters

Instead, you need to look for a clever alternative, one which would also work on those old stereo cassette players: an FM transmitter. These are unsurprisingly more expensive, but they can work very well. The idea is simple: you connect your



iPhone (or any other compatible iOS device) to it, and it starts broadcasting your iPhone's audio on a particular radio frequency. Tune your car radio to that frequency and hey presto, you can hear your music wirelessly. It sounds great, but it's not a flawless solution. There are many radio stations out there so you could hit some interference even if the device usually broadcasts in little used frequencies. You can of course change that frequency manually, but you might end up taking some time finding the perfect one, only to move to another geographical location on your travels and have to do the process all over again.

Which iPhone connector do you have?

Another potential issue is that you need to make sure that device will work for the iPhone you own. And it's not only the type of connector it has - either the original one or the new Lightning connector, but the innards have changed from generation to generation which means it's possible that a device that works for the iPhone 3G may not work for the iPhone 4s even though their connector is exactly the same, so a little research will be necessary. Griffin Technology went around this problem with their iTrip Auto Universal Plus, which connects to your iPhone's stereo minijack, making that device compatible with a wide range of phones and tablets.

Get a 'Made for iPhone' car stereo

But to be honest, unless there's a specific reason why you don't wish to part with your car's old stereo, the absolute best option would be to fit a new one.

Halfords for instance offer a great many models, all with USB ports and fancy modern features. You need to be careful however: just because it has a USB port doesn't mean that it will necessarily work with your iPhone; you might be able to hear your music, but your iPhone may not charge, for instance.

It's therefore important to make sure you get one with a 'made for iPhone' sticker. Alternatively, if you can go into a showroom with your iPhone and its cable, the best way to be absolutely sure your potential new car stereo will work as expected is to hook it up to the ones on display and try them out for yourself.

Of course, this would be the most expensive solution, but what you'll get is much better clearer sound (beating the cassette stereos hands down), no interference from radio stations (take that, FM transmitters), plus your phone will be charging while playing, saving you from having to buy a 12v charger. Yes, car stereos can cost upwards of £300, but some iPhone-compatible models will only set you back by as much as £45, and at that price, it may well be worth leaving the past behind and embracing the iPhone-music-enabled future.





How to use a Micro-USB cable with iOS device

Connect an iOS device to a computer

When Apple introduced the proprietary Lightning connection on iPhone, iPad and iPod, it made laying your hands on a compatible cable a total pain. Here we show you how to charge or connect to a computer your iPhone, iPad or iPod using a Micro-USB cable.

How to convert Micro-USB to Apple Lightning

When Apple changed the proprietary connector from the 30-pin dock to Lightning on its iPhone 5, iPad 4 and fifth-gen iPod touch, for many users it

meant yet another cable to carry around, especially if they were also using older Apple products and/or an Android smartphone or tablet.

Given that Apple charges £15 for its official USB-to-Lightning cable, you probably have just the one Lightning cable - that which came with your iPhone, iPad or iPod. Which also means it's probably at home, attached to your wall charger, and never where you need it when you need it.

Ask someone in the office to lend you an iPhone cable and you can almost bet on the fact they will pull out an old-style 30-pin dock connector cable. That's no good.

Wouldn't life be so much easier if you could charge or connect to your computer your iPad, iPhone or iPod using Micro-USB? These cables are never in short supply, bundled with everything from Android phones and Android tablets to Bluetooth speakers and headsets, external hard drives, portable USB chargers... the list goes on. I have a drawer full of them.

Fortunately, all you need to get your iPad, iPhone or iPod working with Micro-USB is a tiny adaptor that can convert Micro-USB to Lightning.

We like this EC2001L 2 in 1 Micro USB Cable with Apple Lightning Adaptor 1.2m from Inateck. It costs £9.99 from Amazon, which might sound pricey, but don't forget Apple charges £15 for its official Lightning cable. And it's incredibly useful.

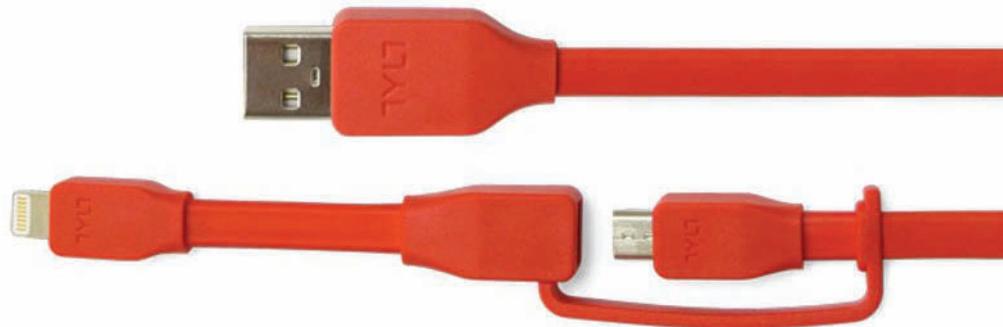
The Inateck EC2001L is sold as a 1.2m Micro-USB cable and a small Lightning adaptor that fits over the Micro-USB connector. Two end caps are also supplied to protect the adaptors in transit. You can

use this adaptor with any Micro-USB cable, not just that which is supplied by Inateck, but its flat design may make it less prone to damage, and at 1.2m this Inateck cable is long enough to reach to the furthest USB ports on your PC or Mac.

If you use a mixture of Windows Phone, Android and Apple products, the Inateck EC2001 will let you charge any of these devices using a single USB cable. Plus, carry the Inateck connector with you and you'll be able to hook up your iPhone, iPad or iPod wherever you go.

Inateck's EC2001L 2 in 1 Micro USB Cable with Apple Lightning Adaptor 1.2m is compatible with all devices that have a Micro-USB connection, plus the iPhone 5, 5c, 5s and 6, iPad with Retina display and iPad Air, iPad mini and iPad mini with Retina display, the fifth-generation iPod touch and seventh-generation iPod nano.

An alternative option is the Tylt Syncable-Duo. It's more expensive, at £27.99 from OnPointUK.com, but unlike the Inateck it is Apple MFi-certified and tethers the Lightning adaptor to the Micro-USB cable to save you losing it. The Syncable-Duo is available in three sizes (1ft, 2ft and 1m) and comes in black, red, blue or green.





Jailbreak an iPhone

How to break in iOS 8, 7 or 6

Jailbreaking your iPhone or iPad is a risky process that we can't unreservedly recommend, but it remains popular among those who wish to install unofficial apps (such as those on the Cydia marketplace) on their smartphone or tablet.

What is jailbreaking? In essence, it means bypassing the locks put in place by Apple on its iPhones and iPads, and thus gaining access to a large number of apps that Apple hasn't authorised.

iOS 8

One of the downsides of upgrading to the new iOS 8 operating system is that you won't be able to

jailbreak it until someone cracks the code. We had to wait for an iOS 8 jailbreak, but only for 35 days, which is impressive stuff – and now you are free (having heard the usual legal caveats and warnings – see below) to perform an untethered jailbreak of an iOS 8 (or iOS 8.1) iPhone or iPad, thanks to fast work from the Pangu group.

Pangu released its iOS 8/iOS 8.1 jailbreak around a week ago, just 35 days after iOS 8 itself was launched. The initial jailbreak was relatively limited, however, and an update since then makes it a more appealing choice for would-be iOS 8.x jailbreakers.

At first Pangu's jailbreak was able only to jailbreak iOS itself without installing the all-important Cydia unofficial app store – and being able to install non-authorised is the main reason why most people jailbreak in the first place. A more recent update fixes this, however, allowing you to install Cydia along with the jailbreak.

Pangu's iOS 8.x jailbreak is compatible with the following iPhones, iPads and iPod touch devices:

- iPod touch (unspecified)
- iPhone 4s, 5, 5c, 5s, 6, 6 Plus
- iPad mini, mini 2, mini 3
- iPad, iPad Air, Air 2

And, cruelly (and crucially for *iPad & iPhone User's* audience), the jailbreak is currently available as a download for Windows systems only. Rest assured that a Mac version is sure to appear in the near future. By the way: it's not possible, we understand, to install the updated version of the jailbreak

immediately: you need to install the basic jailbreak and then perform an update.

You can find more details on Pangu's website. (You'll need to use Google Translate, since it's in Chinese.) And iDownloadBlog has detailed advice on installing the jailbreak, and updating it.

A warning

But first... Some of the unofficial apps that you'll get access to after jailbreaking are pretty tempting, and may offer features you'd never otherwise be able to access; blocking a phone number on an iPhone, for instance, wasn't possible officially until iOS 7 launched, but an app on Cydia (where you can download apps for jailbroken iPhones and iPads) let you do it easily.

Read: Pros and Cons of jailbreaking an iPhone.

So why doesn't everyone jailbreak? Well, for one thing it's by no means straightforward, as we'll see shortly. Jailbreaking is also legally ambiguous, risky, and prone to void any warranties you have with Apple. We advise you to think long and hard before going ahead with the jailbreaking process.

Apple itself offers advice on the subject



of jailbreaking (although you may feel that the company is biased in this respect, since it wants to continue getting its cut of the revenue from official app sales). In this tech note Apple suggests that jailbreaking your iOS device may lead to security vulnerabilities, instability, shortened battery life, unreliability, disruption of services and inability to apply future software updates. It may result in Apple denying service for your device.

Nonetheless, many Apple fans have been jailbreaking iOS devices for years without encountering these issues. But once they've jailbroken such a device, they understand that they should expect no help from Apple if it causes them trouble in the future. With choice comes responsibility.

iOS 7 (and iOS 6 and earlier)

We had to wait for a bit, but the jailbreak tool for iOS 7 has been launched by the EvasiOn team. (The EvasiOn team offer one word of warning, however: "Over The Air updates of iOS 7 are known to create an issue and make the jailbreak fail. Some devices are then stuck on the Apple Boot Logo. Until we fix that, please restore your device to 7.0.4 with iTunes first.")

Note that iOS 7.1 closed the loophole that allows EvasiOn's iOS 7 jailbreak tool to work. Bear this in mind when considering whether to update your operating system to iOS 7.1 when the full version comes out. Before you start, back up your iPhone or iPad, and switch off the passcode (at least for the duration of the jailbreak process).

You'll need to download the Evasi0n7 tool, which is available for Mac OS X and Windows, and is compatible, the makers claim, with all models of iPhone and iPad running iOS 7.0 to iOS 7.0.4. The tool is available from mirrors on evasi0n.com. Double-click the .dmg file to decompress it and an evasi0n window will appear on your desktop. Drag the evasi0n application out of the window to the desktop and launch it.

Connect your iOS device and click the Jailbreak button. Evasi0n will retrieve some information from your device. The device will then reboot and prepare itself for the jailbreak. Don't do anything with your device during this stage.

Evasi0n will now install Cydia - the application that provides access to third-party apps - on your device. When instructed to by evasi0n, unlock your device by pressing the Home button and swiping the Slide to Unlock switch to the right. You should see a new Jailbreak icon on your Home screen. Tap it and evasi0n will carry on with the final stage of the jailbreak. You can now quit evasi0n by clicking the Exit button.

Your device will reboot, briefly display the evasi0n screen, show the Apple logo, and then show the evasi0n screen again, which details the progress of the jailbreak installation. Finally, your device is ready for you to use in the normal way.

The one difference you'll see is a Cydia icon on the home screen. Tap it and Cydia launches, prepares its file system, and then quits. To then use Cydia as intended, tap its icon once again, choose your user type (User, Hacker, or Developer), tap



Done, and the Cydia interface loads.

The version of Cydia you're using may need updating; older versions of Cydia may not support Cydia's newer third-party apps. To do that, tap

the Changes icon at the bottom of the screen and then tap Refresh in the top-left corner. If any updates are available (as evidenced by green check marks) tap the Update button in the top-right corner of the display. Cydia will download the latest updates and reboot the device.

What you choose to install is entirely up to you. Some people choose to install OpenSSH so that they can remotely access the device's file system via a standard FTP client. However, if you enable this feature, be sure to change your device's root password from the default "alpine," which is used by all iOS devices. Fail to do so and others around you could hack into your device. To learn how to change the password, tap the Root Password How-To link on Cydia's About screen.

Future updates of jailbreaking tools

There was a decent wait between Apple releasing iOS 7 and a jailbreaking tool being released for the system – most likely because iOS 7 represented a more substantial update than most new versions iOS. As Apple releases minor and major updates to

iOS, new jailbreaking tools (and updates to tools) will be released too, but there may again be a wait.

If you want to keep track of when jailbreak tools are launched in the future, two useful options are following @evad3rs on Twitter (that's the account used by evasi0n), and checking out the jailbreaking section on Reddit.

In the mean time, look out for scammers. Lots of unscrupulous companies and individuals claimed to have cracked iOS 7 before a reliable tool was released by the Evasi0n team, and offered to give you the jailbreak for a sum of money – often \$50.

Tethered and untethered jailbreaking

Finally, some words on jailbreaking terminology.

Jailbreaking has been in a largely dormant state since the release of iOS 6. In that version of the mobile operating system, Apple closed many of the avenues that had once been used to crack iOS open. Tethered jailbreaks require you to attach your iOS device to your computer and run an application to jailbreak it. If you later power off the device and then restart it, the jailbreak is wiped out, and you have to repeat the entire process. These kinds of jailbreak were the first to be developed. But what prospective jailbreakers wanted was an untethered method, where the hack would remain in effect even after the device was switched off and on again.

That untethered jailbreak arrived in the form of evasi0n. Like jailbreaks before it, evasi0n doesn't unlock an iPhone). Rather, it simply allows you to install third-party apps not approved by Apple via the Cydia store we mentioned earlier.



iOS security

What security apps do you need to keep safe

We look at some of the security threats that have hit Apple's iOS devices, including WireLurker, the Olag Pliss ransom case and the SSL flaw. We also discuss what measures you should implement to ensure your device is safe, and we evaluate whether the iPhone and iPad are safe from malware.

According to Apple the iOS platform is incredibly secure. The company even states that it "designed the iOS platform with security at its core. Keeping information secure on mobile devices is critical for any user, whether they're accessing corporate and customer information or storing personal photos, banking information, and addresses. Because

every user's information is important, iOS devices are built to maintain a high level of security without compromising the user experience."

As a result, Apple's iPad and iPhone are generally considered to be safe and secure devices to use, and many confidently claim that iOS is safer than Android. However, Apple's iOS platform for the iPad and iPhone hasn't been without its security breaches and vulnerabilities, and nor has iCloud, the cloud storage service which makes it possible to access documents, photos and more on all of your Apple devices.

2014 has been a year of security vulnerabilities and targeting of iOS. First off, a security flaw was discovered in late February 2014 that made it possible that an attacker could intercept your data if you are using an unprotected hotspot, perhaps in Starbucks or an internet café.

Then in late May, some users from the UK, Australia and other countries reported that their iPhones were locked with a message claiming the device was hacked by a person or group named Oleg Pliss who demanded \$100 or €100 to unlock it.

Next came news that nude photos of Jennifer Lawrence and around 100 big-name stars including British model Cara Delevigne, Cat Deeley, Kelly Brook, and Rihanna had made their way onto image bulletin board 4chan, at the end of August. Apple claims that the privacy breach was not the result of a compromise of any of the systems used for its iCloud storage service. However, through some means hackers were able to access celebrity photos that were stored in iCloud.



Then in November the first malware with the potential to infect all iPhones and iPads was discovered by security firm Palo Alto Networks. Malware affecting jailbroken devices is nothing new but WireLurker – as the researchers christened it – used a two-stage attack involving USB connections via a Mac or PC, and a glitch in an iOS feature that allows organisations to install their own apps on non-jailbroken iOS devices. While WireLurker installed malicious apps on jailbroken phones and plundered them of personal information – including the device's phone number and iCloud address book – non-jailbroken phones got off more lightly, with just a benign pirated comic book app invisibly installed on the phone. Basic diagnostic data was also passed to a central command server. Apple has since blocked WireLurker on both iOS devices and

Macs but experts suggest that the technique used will give rise to further attacks.

So, following these recent situations, can Apple maintain its stance that iOS is secure. We examine the various cases that have begged the question of security on the iOS platform, we look at how to make sure your iPhone or iPad is secure (and the problems some people have experienced when updating their device), and we asking whether this mean that Apple's iOS isn't secure?

Security threats to iOS devices

WireLurker

WireLurker was a Trojan that was inserted into pirated Mac OS X software, such as popular game titles, as well as within simple Windows executables that promised to install pirated apps on a user's iOS device.

Notably, although WireLurker infected iOS devices, it wasn't malware in the traditional sense in that one iOS device did not spread the infection to another. WireLurker could only delivered via a USB connection to a Mac or Windows computer following the download of dodgy software offered on various Chinese websites. The infected software was downloaded over 415,000 times making WireLurker possibly the biggest outbreak of iOS malware yet detected. Windows users got off lightly because the version of WireLurker used was older and so buggy that it was essentially useless. It also targeted only jailbroken devices.

The version of WireLurker infecting Macs was significantly more sophisticated. It infected other



apps on the user's computer to ensure it was kept running, and installed startup scripts. After grabbing some diagnostic details about the Mac, which it sent to a command server (since closed down), it added an invisible background process that waited for USB connections to iOS devices.

If a user attached a jailbroken device then WireLurker used components of the Cydia jailbreak system to grab personal details, such as the user's iCloud address book and the device's phone number, and upload them to the command server. It then infected apps on the device and inserted a handful of other malicious apps.

If a non-jailbroken device was attached, which accounts for the majority of iOS devices in use today, WireLurker silently installed a comic book app on the user's device. Adding third-party apps via USB should be impossible because of the requirement that they're digitally signed, which usually happens upon purchase via the official App Store (and which is why iTunes can restore apps to your device).

However, WireLurker subverted the enterprise provisioning system that allows organisations to install their own apps on the iOS devices of their employees. This requires a security profile to be installed within the Settings app but the hackers behind WireLurker were able to hide this within the app itself so that it was installed when the app was first run. Users had to click Continue on a dialog box but there was no warning a malicious app might be being installed. Users were sure to run the app when they first spotted it in order to discover what it was.

Aside from the nasty Mac infection, which can be cleared-up using a tool created by the security researchers, the good news is that the app installed on non-jailbroken devices was benign. It was probably more of a test to see if the procedure was possible. Had an infection taken place the existing security measures within iOS – such as the

sandboxing of apps – would have blocked nearly all malicious activity. However, WireLurker has exposed significant flaws within iOS with regard to USB connections and enterprise provisioning that Apple will no-doubt address soon.



Jennifer Lawrence nude photos case

Jennifer Lawrence and around 100 big-name stars including British model Cara Delevigne, Cat Deeley, Kelly Brook, and Rihanna that made their way onto image bulletin board

4chan, at the end of August. The news has lead to some uncertainty about just how secure iCloud is, and what you should do to make sure that the same thing doesn't happen to you.

First things first, if you aren't a celebrity chances are nobody is interested in any photos of you. According to Apple these photos were stolen from iCloud in a "very targeted attack", targeted at celebrities. The hackers then asked for payment in bitcoin to view the photos, some of which were claimed to be fake by the celebrities involved.

Apple said in a statement that: "After more than 40 hours of investigation, we have discovered that certain celebrity accounts were compromised by a very targeted attack on user names, passwords and security questions, a practice that has become all too common on the Internet."

The company insists that the privacy breach did not stem from a compromise of any of the systems used for the cloud storage service. Apple said: "None of the cases we have investigated has resulted from any breach in any of Apple's systems including iCloud or Find my iPhone."

Earlier reports had suggested that a flaw in iCloud was responsible for the hack, but Apple says that none of the cases it has looked into were tied to any vulnerability in the company's systems.

Apple is working with law enforcement on the matter. The FBI is also investigating.

Oleg Pliss ransom case

Back in May some people in Australia, the UK, and elsewhere had their Apple ID accounts

compromised and their iOS devices held to ransom via Apple's Find My iPhone service.

Apple's Find My Phone feature allows iPhone, iPad and Mac owners to remotely lock and track their devices if they're lost or stolen. A custom message can be displayed on the lockscreen when the feature is activated. In late May, users reported that their iPhones were locked with a message claiming the device was hacked by a person or group named Oleg Pliss who demanded \$100 or €100 to unlock it.

Apple said at the time that the incidents were not the result of iCloud being compromised and hinted that password reuse across multiple online accounts might be the cause of the hijackings.

By mid-June, Russian authorities revealed that they had arrested a man and a teenaged boy from Moscow under suspicion that they compromised Apple ID accounts and used Apple's Find My iPhone service to hold iOS devices for ransom. It's not clear if the two Moscow residents, aged 16 and 23, were behind the Oleg Pliss attacks, but the crime referred to in the press release the Russian Ministry of Interior issued to announce the arrests was of a similar nature to the iPhone ransom attacks.

The two allegedly compromised email accounts and used phishing pages and social engineering techniques to gain access to Apple ID accounts. They are then accused of using the Find My Phone feature to lock the associated devices and send messages to the owners threatening to delete data unless the ransom was paid. Another technique involved placing advertisements online that offered



to rent an Apple ID account with access to a lot of media content. Once users accepted the offer and linked their devices with that account, the attackers then used the Find My Phone feature to hijack them, Russian authorities said.

What was the SSL flaw in Apple's iOS

In February 2014, Apple issued updates to iOS 7 to protect against the security flaw. We recommend that users install the updates.

The SSL problem was with Apple's implementation of a basic encryption feature that shields data from snooping. Most websites handling sensitive personal data use SSL (Secure Sockets Layer) or TLS (Transport Layer Security), which establishes an encrypted connection between a server and a person's computer. If an attacker intercepts the data, it is unreadable.

However, iOS's validation of SSL encryption had a coding error that bypassed a key validation step in the web protocol for secure communications.

As a result, communications sent over unsecured Wi-Fi hot spots could be intercepted and read while unencrypted, potentially exposing user password, bank data, and other sensitive data to hackers via man-in-the-middle attacks. They could also supply fake data that makes it appear an authentic web service has been cryptographically verified.

In the case of the SSL flaw, the danger is mitigated somewhat since an attacker must be on the same network as the victim. However, you could be open to attacks if you are using a shared network and someone is snooping on that network. This could be someone in your local Starbucks.

Secured Wi-Fi networks, such as home and business networks with encryption enabled, are not affected. Apple sent a notification of the iOS 7.0.6 update but if you haven't updated be sure to go to Settings > General > Software Update. You can find the information here.

How did the celeb photos hack happen then?

Reports initially suggested the iCloud photo leak might have been the result of hackers taking advantage of a flaw in the Find My iPhone service that was said to allow an attacker to try an unlimited number of passwords until the right one was found.

TheNextWeb reported it had discovered the script that was used to hack into the celebrity accounts on the software site GitHub. That report claimed the script used a flaw in Find My iPhone to crack the

passwords for the accounts using “brute force” – in other words the software was able to repeatedly enter the most popular passwords approved by Apple until it hit on the right one. Users would have been unaware their accounts were compromised.

However, Apple says the hack wasn't the result of an iCloud vulnerability or a breach in Find My iPhone, but rather a targeted attack where hackers sniff out user names, passwords, and answers to security questions. As Apple says, targeted attacks on specific users are commonplace. For example, Wired editor Mat Honan had his iCloud account hacked back in 2012. Another suggestion as to how these compromising celebrity photos were acquired was that it could have been through an email phishing attack. The theory is that celebrities could have been tricked into entering their usernames and passwords on a fake login page. We wonder if celebrities are really that silly, although if the email was claiming to be about their nomination at the Baftas or Oscars then anything is possible.



Why were hackers able to get the photos?

If you ever lose your iPhone, you may be surprised to find that when you sync up a new iPhone with your iCloud account your old photos appear on the device. As long as you, sensibly, use iCloud to back up the data on your phone when you get your new phone and sync it with the backup you will recover your photos.

Apple also offers a service where the last 1000 photos you take are sucked up into the cloud in an Photostream that can be viewed on all your Apple devices including iPad, iPhone, and Mac. This is a handy way to view and save images to a different device. However, the side effect of these handy services is that your photos are in the cloud and anyone who gains access to your iCloud account could gain access to them. Even if you delete a photo on your iPhone it will remain in your iCloud photo stream until you delete it from that service.

There are various ways a hacker could access those photos. They could sync a device using the Apple ID, or they could use software that will access and recover an iPhone iCloud back up, for example.

The iPhone isn't the only phone to saves photos to the cloud. Android phones saves photos to Google+ and Microsoft's Windows Phone saves to OneDrive.

Stop people getting hold of your photos

Your phone may only hold photos of your dog or children but it is wise to exercise some caution regardless. In the wrong hands any of your information could be used to nefarious means.

There are a few ways you can make sure that nobody can access the photos on your iPhone and in iCloud. You could, for example, disable photo sharing to iCloud, but there is no need to be so drastic, as we said above, it's a useful feature.

- 1.** Choose a secure password. A good password will contain upper and lowercase letters, punctuation, a number and be 8 to 14 characters long.
- 2.** Use a unique password for every service you access. Most people use the same password for every online service they use which is a danger because once that one password is discovered then all your accounts are vulnerable.
- 3.** Luckily if you have trouble remembering too many password there are services that will



generate passwords for you and enter them on your behalf when you need them. You only need to remember one password with a password generator such as 1Password.

- 4.** You can also use Apple's iCloud Keychain to suggest secure passwords – but make sure you use a password to access your Mac and a passcode for your iPad and iPhone. Read more about setting up Apple's iCloud Keychain here.
- 5.** Avoid opening and don't respond to phishing emails (even if you think it's funny). And definitely don't click on any links or download any documents that are attached. Note that many phishing emails will appear to have come from friends whose email accounts have been hacked. Follow this advice about phishing emails.
- 6.** If you take a photo and don't want it to stay in iCloud delete it from your Photo Stream. In the Photos app, go to My Photo Stream select the image and delete. This will remove the photo from any devices connected to your photo stream.
- 7.** Make sure that you use two-factor authentication whenever it is offered. Two-factor authentication adds an extra layer of security besides your username and password. This second layer of authentication involves receiving a security code on your iPhone or other device, which you have to enter in order to access your account. This means that even if someone managed to get hold of your

password, if they don't have access to your phone to get that second security code, they can't log in to your account.

8. Make sure that you have good answers to your security questions – not answers anyone could easily guess. And make sure you remember what those answers are.

How to make sure your iPhone or iPad is secure and safe from WireLurker

Make sure you keep your iPhone up to date with the latest updates. It may be necessary to install an iOS update to ensure that there was no chance of someone snooping on your activity.

To avoid malware infections such as WireLurker, never attach your device to a computer or even



a USB charger unless you're 100% sure it's safe. Remember that infections on a Mac or PC are likely to be invisible to the user.

Additionally, never jailbreak your phone because – quite simply – it undoes all the good work Apple has done in securing iOS.

Never use pirated software (or software that promises to install pirated iOS apps), and keep iOS updated too, so that you keep ahead of the jailbreaking exploits that are used by hackers to infect devices.

If you suspect you've been infected by WireLurker or a similar malware, open the Settings app and then tap General > Profiles. If you're infected you'll see an entry here that you didn't install. Tapping it will offer the chance to remove it (although Apple has already revoked the profile used in WireLurker).

Bear in mind that some apps such as the Cloak VPN app install their own profiles here, as do some Wi-Fi providers. However, you should already know about these, having okayed their installation.

Does this mean that Apple's iOS isn't secure?

It's not going to help the company convince people that they don't need to be protecting their devices. Many users coming from a desktop environment are already confused about security services for the iPad and iPhone, asking whether they need to install security software on their iPad or iPhone.

Generally these devices are safe because many security features are enabled by default and key features, like device encryption, are not configurable, so users cannot disable them by



mistake. Other security measures include low-level hardware and firmware features that protect against malware and viruses.

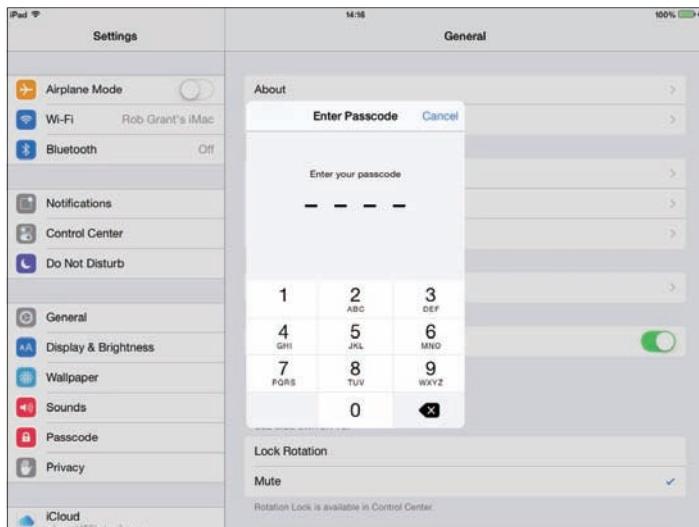
Apple also approves every third-party application that appears on the iPhone and iPad. As Apple explains: “Unlike other mobile platforms, iOS does not allow users to install potentially malicious unsigned apps from websites, or run untrusted code. At runtime, code signature checks of all executable memory pages are made as they are loaded to ensure that an app has not been modified since it was installed or last updated.”

Another level of protection comes from the device passcode, which means that an attacker with access to your device cannot get access to your data.

Anti-virus programs

Despite the security threats mentioned above, you don't need anti-virus software for the iPad and iPhone – not that there is any anti-virus software

available for the device. iOS is designed and built to only accept and install software that has been approved by Apple and run through the App Store. As such Apple has pretty much guaranteed that you won't encounter any malicious software on your iOS device. Similarly security companies complain that Apple will not approve any security focused software for the iPad or iPhone, presumably Apple doesn't want to give the impression that such software is necessary. Having said that there are a variety of security-themed apps on the App Store. Security specialist Symantec has a number of apps such as Symantec Mobile Encryption and Symantec Secure Email. These are typically designed to integrate the iPad with an enterprise environment, allowing iOS devices to communicate securely with enterprise servers. But for the home user, the iPad (and iPhone) is one of the safest computing experiences you can



imagine. It's combination of locked down hardware and software make it more secure out of the box than a Mac or PC with security software installed.

Is JavaScript safe on the iPad and iPhone?

JavaScript is another area where you might want to be extra cautious. While JavaScript offers a number of additional features to websites, there are some concerns that it can be used to launch malicious attacks. It depends on the kind of website you typically browse on an iPad or iPhone. If you look at some of the less salubrious sites you might want to go to Settings > Safari and turn JavaScript to Off.

Are there any iPad/iPhone security risks at all?

The biggest risks aren't remote attacks, but up close and personal theft. Somebody either stealing your device or using it when your back is turned. To protect somebody from accessing your iPad or iPhone without your knowledge be sure to set either a passcode or password.

- Open Settings > General and tap Passcode Lock
- Click Turn Passcode On
- Enter a four digit PIN
- Re-enter the four digit PIN
- Tap Require Passcode and ensure it is set to Immediately
- Tap Passcode Lock to get back to the Passcode Lock settings

You can use a password instead of a passcode. This will ensure a higher level of security, but you

will need to enter the combination of letters and numbers to unlock your iPad or iPhone, so most people stick with the passcode.

- Tap Simple Passcode to Off
- Enter a password (a combination of numbers and letters)

Enable Find My iPad/iPhone

Find My iPhone is an app and service that you can install to locate an iOS if it has gone missing. It also enables you to remotely wipe an iPhone or iPad, or send a message to it in the hope of retrieving a lost iPhone or iPad.

- Click on Settings > Privacy > Location service
- Tap Find My iPad and click it to On
- Open the App Store and find the app and install it



Open the Find My iPhone app on an iPad or iPhone and log in to see where all your devices are. Note that this service can also be accessed from Apple's iCloud website.

Save passwords and credit card details in Safari

The iPad can be used to save your passwords and credit card details. Before doing this it is considered advisable to set up a passcode first, as an additional security measure. To set up Safari to save passwords follow these steps:

- Tap on Settings and Safari
- Tap Passwords & Autofill
- Tap the Names and Passwords button to turn it on (green)

When you next visit a website in Safari, and enter your name and password, a popup will appear asking if you want to save the password. Tap on Save Password and the password will be stored locally in the iPad.

- Tap Simple Passcode to Off
- Enter a password (a combination of numbers and letters)

To access password details in Safari

- Tap on Settings and Safari
- Tap Passwords and Autofill
- Tap on Saved Passwords
- Tap on a password entry and enter your Passcode

- You can now view the Website, Username and Password details on the iPad.

To delete a password from Safari

- Tap on Settings and Safari
- Tap on Passwords and Autofill
- Tap Edit
- Tap the selection circle next to the password you want to delete
- Tap Delete and Delete again in the pop-up window
- Enter your passcode

Save your credit card details into Safari

If you do a lot of shopping online you might want to enter your credit card details into Safari. They can then be used on a website to make a payment. Follow these steps to add a credit card to Safari

- Tap on Settings and Safari
- Tap on Passwords and AutoFill
- Tap on the button next to Credit Cards
- Tap on Saved Credit Cards
- Tap on Add Credit Card
- Fill out the Cardholder, Numbers, Expires and Description and tap Done

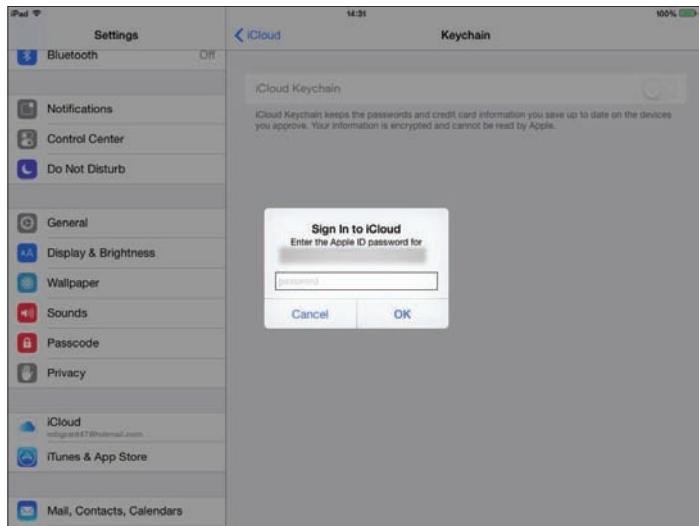
When you are using a website and it requests your credit card information you can use the Autofill option in a pop-up window to fill in the information automatically. Note that you will still need your CVV (Card Verification Value) number to make a purchase. This is the three-digit number on the reverse of most credit cards.

What is iCloud Keychain?

If you have multiple Apple devices and want to use Safari to save your passwords, then you can use iCloud Keychain to synchronise your passwords from one device to another. So if you enter a password into a website on your iPhone, it will automatically be added to your iPad.

You must have your passcode activated to use iCloud Keychain. Follow these steps to turn it on:

- Tap on Settings and iCloud
- Tap on Keychain and turn on the button next to iCloud Keychain
- Enter your iCloud password and tap on OK
- Move to another computer or device using the same iCloud. On the Mac open System Preferences and iCloud and details next to iCloud
- Enter your Apple ID and Password and click Allow



Your iPad or iPhone will now have all the usernames and passwords that have been stored on your Mac (and vice versa). You can also do the same thing with your iPhone to sync between all your devices. If you don't have a Mac you can use an iPhone to authorise the iPad or vice versa, just follow the Notification pop-up and enter your Apple ID and Password on the device.

Your passwords are generally secure on your iPad or iPhone, although you shouldn't share them with other people. And, of course, anybody who has access to your Passcode as well as your device will then be able to view all your other passwords. So be careful about sharing your iPad and passcode with other people.

We have a lot of faith in Apple to keep our details secure on its server. Apple generally takes security of its back-end systems very seriously. But you will need to enter your passcode to use iCloud Keychain, so it often feels like you're simply swapping one password for another.

Set up iCloud on all your devices. The rest is automatic.

To get the most out of iCloud, update to the latest [system requirements](#).
Then set up your iPhone, iPad, iPod touch, Mac, and PC.



For iPhone, iPad,
and iPod touch



For Mac



For Windows PC



Office on the iPad

Edit Word, Excel and PowerPoint docs on the go

Just a few days after it announced that a new version of Office for Mac will arrive in the second half of 2015, Microsoft has just made new versions of its Office apps for iPad and iPhone available for free. The updates mean that both iPad and iPhone users can now access and edit Word, Excel and PowerPoint documents on their iPhones as well as their iPads, as there is no longer any need to have a Office 365 subscription to access the editing features.

The updated apps are available for all iOS devices capable running iOS 7 or higher. Android tablets merely get a new preview version of the Office apps. Previously, there were different versions of Office

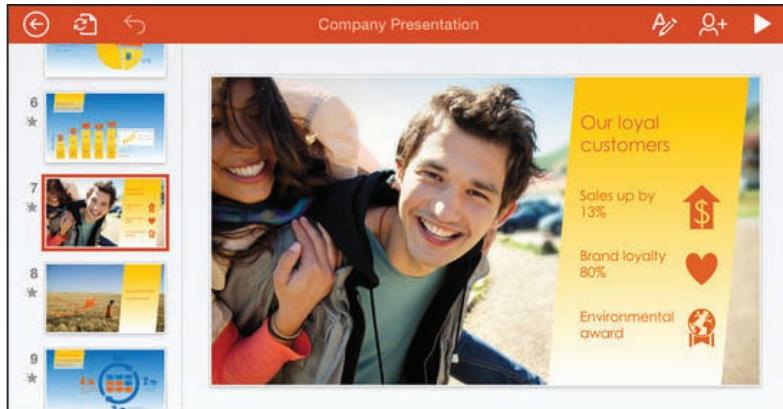
for iOS devices, Office for iPhone introduced in June 2013, and separate Word, Excel, and PowerPoint apps for iPad, introduced in April 2014.

Word, Excel and PowerPoint

When Office Mobile for iPhone arrived in June 2013 it was a single app that only allowed viewing of Word documents, Excel spreadsheets, and PowerPoint presentations.

The long absence of Office on the iPad lead to speculation that Microsoft was holding back on an iPad version of the app while it attempted to breathe life into its Surface tablet hybrid. But eventually, in April 2014, Microsoft launched separate Word, Excel and PowerPoint apps for iPad.

By the time Microsoft launched the iPad apps in April 2014 there was a version of Office available on the Microsoft Surface. However, Microsoft bought the apps to the iPad before offering a version of Office for Android tablets or a version for touch-enabled Windows devices.



When they launched in April 2014 the iPad apps allowed you to edit the files - but only if you had an Office 365 subscription. Otherwise you could only view documents which were marked as read only - but at least there were separate apps with more features than the iPhone version offered.

Now Microsoft has made the individual Word, Excel and PowerPoint apps available for iPhone and iPad users. Whether you use them on your iPad or your iPhone, the apps will offer the same set of features, although there will be a slightly different user interface suited better to that device.

Microsoft says that the new versions of Word, Excel, and PowerPoint are built on the same code base as the Office for iPad apps introduced back in April, but each is optimised for the device you're working on.

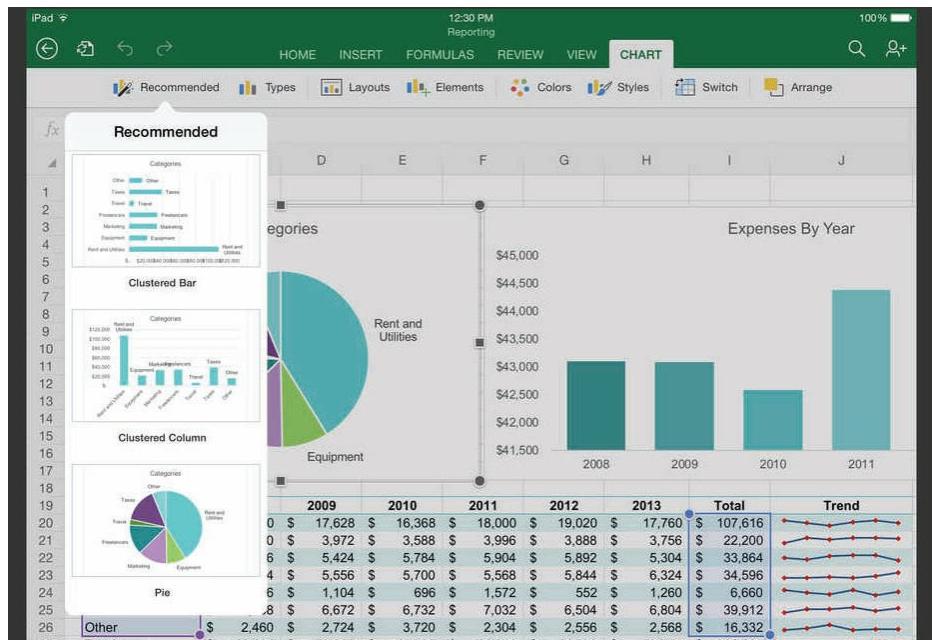
What does this mean for Microsoft?

When Microsoft introduced the Microsoft Office Mobile app for iPhone users in 2013, but left the iPad, which is naturally a better platform for document editing, unsupported, many concluded that Microsoft was intent on promoting its own Surface tablet instead. When Microsoft introduced the iPad apps in June 2014, some concluded it was a marketing ploy geared to sell more subscriptions to Office 365. Others concluded it was desperation – a last throw of the dice for a company that had taken mobile seriously too late and couldn't break into the iOS/Android duopoly?

News that the company appears to have thrown in the towel on requiring Office 365 subscriptions

may be considered evidence that the subscription method isn't working out as well for Microsoft as they may have hoped. Although Microsoft's recent decision to release a new version of Outlook for Mac to Office 365 subscribers almost half a year before non-subscribers can expect to see it would suggest that the company isn't giving up on the subscriptions model yet. Read more about the new version of Outlook for Mac here.

Indeed, there are still incentives for purchasing an Office 365 subscription to go with your iPad and iPhone apps as you will gain advanced change tracking features, no limits on the ways you can use paragraph styles, and advanced chart, table, and picture formatting tools. Also, if you're planning on



using OneDrive for business documents, you will be required to purchase an Office 365 account.

What does Office on iOS mean for Apple

The arrival of Word, PowerPoint and Excel on iPads and iPhones, with full editing features is certainly exciting news for iOS users, although the lack of Office software for so long means most have found alternative word processors by now – maybe Pages, maybe iA Writer. It also means that business users who had avoided iOS because of its lack of Office apps will now have no reason not to use their iOS devices.

But is it too late for Microsoft? While Microsoft was dawdling Apple has been innovating and the iWork apps: Pages, Keynote and Numbers have come on in leaps and bounds since the first poor Office app arrived on the iPhone. With Apple's iWork apps offering true continuity across all your devices, and iCloud storage, it seems that Microsoft's offering may be too little too late.

Given the fact that Apple gives away Pages, Numbers and Keynote for new iPad and iPhone users, Microsoft needed to pull out all the stops to make its apps as beautiful and easy to use as Apple's. And for those who thought the iPad wasn't a serious work tool the arrival of fully editable Office apps on both devices indicates otherwise.

Back when the iPad versions launched in April, Mike Culver, vice president and general manager of mobility at Logitech, got in touch to offer his thoughts on the launch (Logitech is sure to see it as an opportunity, since it makes – among other

things - iPad keyboards). He told us: "Through the introduction of the iPad Air with iWork, Apple underscored that the iPad is not just for content consumption, but for content creation. The addition of Microsoft Office is a second endorsement of that.

"Adding Microsoft Office and a keyboard to the iPad creates the perfect combination for using the tablet as your productivity device on the go."

Price

Microsoft Word, Excel and PowerPoint for iPad and iPhone are free to download from the iTunes App Store. If you have a subscription to Office 365 you will gain a few additional features that aren't available to other users including advanced change tracking features, no limits on the ways you can use paragraph styles, and advanced chart, table, and picture formatting tools. And if you're planning on using OneDrive for business documents, you will be required to purchase an Office 365 account.

For business users, an Office 365 subscription is available in a number of different packages. Small Business can sign up for £3.30 a month (£39.60 a year) but they won't gain the desktop versions of the apps. The Small Business Premium package costs £8.40 a month (£100.80 a year, 25 users, including desktop versions). Midsize Business can sign up for 9.80 a month (300 users, including desktop versions and Active Directory). There are also enterprise offerings for £2.60, £5.20 and £15 a month.

Home users can sign up for Office 365 Home Premium subscription at £7.99 per month or £79.99 a year and get access to the features, including

being able to create and edit documents, as well as desktop versions of the Office apps.

Subscribing to Office 365

Wondering whether to get a subscription to Office 365? This is what you get for your money.

Once you have a subscription to Office 365 you can edit documents or create new documents on your iPad. Users can also open existing documents stored on their OneDrive or any other SharePoint location. You also get 60 minutes of free Skype calls each month, and 20GB of SkyDrive cloud storage for each of up to five users.

Syncing

Office for iPad integrates with a user's SkyDrive account, so users can create a document in the Office and then revise it on their iPad while commuting. The document will maintain its formatting even if the mobile version doesn't support that particular feature.

The documents you have stored in OneDrive must be downloaded to your iPad before you can work on them. They are synced dynamically to the Microsoft Cloud at intervals. You can create and save documents on your iPad without saving them to OneDrive, handy if you are offline. However, it appears it's not possible to move documents from OneDrive to your iPad if you want to work offline.

You can collaborate on documents, editing them at the same time as colleagues – you need to tap a share button in the upper left of the toolbar to invite others to access the document.

